

When your mind wanders,
where does it go?



Laser Books:
new worlds of adventure.



Welcome to the Loser Experience. Where your mind is free...and your emotions caught.

Welcome to a unique and breath-taking series of SF adventure. Edited by Roger Elwood and featuring spectacular covers by Kelly Freas.

Three original novels every month. Just \$1.25 each, wherever you buy paperback books.

Expect the unexpected. Loser Books. Provocative. Penetrating. Unforgettable.

Laser Books

MPO Box 788, Niagara Falls, NY

New Worlds of
Adventure.

FANTASY AND SCIENCE FICTION

SEPTEMBER 1976

POC 52210-4

THE MAGAZINE
Fantasy AND

Science Fiction

SEPTEMBER \$1 • UK 55p.

Barry Malzberg
Robert F. Young
Curt Siodmak
Algis Budrys

ISAAC ASIMOV
To the Top



FANTASY AND SCIENCE FICTION

SEPTEMBER 1976

PDC 58370-9

THE MAGAZINE

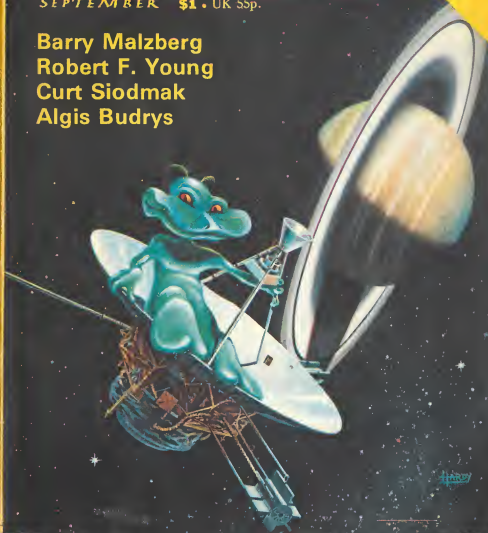
Fantasy AND

Science Fiction

SEPTEMBER \$1 • UK 55p.

**Barry Malzberg
Robert F. Young
Curt Siodmak
Algis Budrys**

**ISAAC ASIMOV
To the Top**



READ IT SLOWLY.

You'll want to. It's that good . . . It's The Hugo Winners: 23 speculative fiction stories that have won the science fiction equivalent of the Oscar—Arthur C. Clarke's superb story, "The Star," Jack Vance's classic, "The Dragon Masters," and Poul Anderson's award-winner, "No Truce With Kings," plus 20 more.

This fabulous 864-page anthology of speculative fiction sells for \$15.45 in the original publisher's edition. It's yours, if you wish, as one of 4 books for just 10¢ (plus shipping and handling) when you join The Science Fiction Book Club.

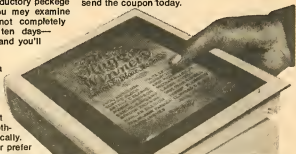
Here's how the Club works:

When your application for membership is accepted, you'll receive your introductory package of four books for just 10¢. You may examine them in your home, and if not completely satisfied, return them within ten days—membership will be cancelled and you'll owe nothing.

About every 4 weeks (14 times a year), we'll send you the Club's bulletin, *Things to Come*, describing the 2 coming Selections and a variety of Alternate choices. If you want both Selections, you need do nothing; they'll be shipped automatically. If you don't want a Selection, or prefer

an Alternate, or no book at all, just fill out the convenient form always provided, and return it to us by the date specified. We try to allow you at least ten days for making your decision. If you do not receive the form in time to respond within 10 days, and receive an unwanted selection, you may return it at our expense.

As a member you need take only 4 Selections or Alternates during the coming year. You may resign any time thereafter, or remain a member as long as you wish. At least one of the two Selections each month is only \$1.98 plus shipping and handling. Other extra-value selections are slightly higher but always much less than Publishers' Editions. Send no money. But do send the coupon today.



2915. *The Star Trek Star Fleet Technical Manual*. Compiled by Franz Joseph. A must for all Star Trek devotees. Taken from the data banks of the master computer. It includes the Articles of Federation, the Romulan and Organian Peace Treaties, and much more. Large size paperback. Vinyl binder. Pub. ed. \$6.95

1784. *The 1976 Annual World's Best SF*. Donald A. Williams, ed. From Fritz Leiber to Michael Bishop, ten of the finest examples of short fiction published in 1975. Includes the Nebula award-winning *Catch That Zepher*. Special Edition.

1826. *Decaywings in the Sand*. By Roger Zelazny. The Stee-sheen, an inviolable alien artifact, is stolen in this fast-paced, witty future thriller. Pub. ed. \$8.95

8532. *The Hugo Winners, Vol. 1 & II*. Giant 2-in-1 volume of 23 award-winning stories, 1955 to 1970. Asimov introduces each. Pub. ed. \$15.45

3857. *The Hole in God's Eye*. By Larry Niven & Jerry Pournelle. Man's first contact with an intelligent alien species. Pub. ed. \$5.95

1412. *Imperial Earth*. By Arthur C. Clarke. A representative to Earth, from Titus, Duncan MacKenzie plans to solve an invention that threatens his homeland's existence. By Hugo, Jupiter and Nebula winning author. Pub. ed. \$7.95

5637. *EPOCH*. Robert Silverberg and Roger Elwood, eds. Contains a complete novel by Jack Vance, plus 23 original stories by other distinguished authors. Niven, Bishop, Pohl, Le Guin, Simak, others. Pub. ed. \$10.95

2022. *Shakespeare's Planet*. By Clifford B. Simak. 600 years after being cryogenically frozen, the only survivor of an Earth exploratory mission finds a strange, sinister creature welcoming him on a new world. Exciting all-world adventure by the author of *Encounter*. Pilgrimage. Pub. ed. \$6.95

5587. *The Master of the World*. By Poul Anderson. Hugo and Nebula author spins a tale of the future Ice Age and the hidden secret of the unbreakable and unconquerable Rogwiki people. Special Edition.

9303. *The Wind's Twelve Quarters*. By Ursula K. Le Guin. 17 brilliant stories about time and space travel and alternate worlds. Semley's *Necklace, The Masters, The Day Before the Revolution* and more. Pub. ed. \$8.95

6221. *The Foundation Trilogy*. By Isaac Asimov. The ends of the galaxy revert to barbarism. An SF classic. Comb. Price \$17.65

8318. *Three to Dorsell*. By Gordon R. Dickson. Packed with adventure and brilliant imagination, these complete SF novels *Reconquest, Taction of Mistake* and *Dorsell* are by this popular Hugo and Nebula winning author. Special Edition.

**ANY 4 SCIENCE FICTION
BEST SELLERS FOR JUST 10¢
with membership**

Science Fiction Book Club 45-5131
Dept. KR192, Garden City, N.Y. 11530

I have read your ed. Please accept me as a member in the Science Fiction Book Club.

Send me, as a beginning, the 4 books whose numbers I have indicated below, and bill me just 10¢ (plus shipping and handling). I agree to take 4 additional books during the coming year and may resign anytime thereafter.

Mr.
Mrs.
Miss

Please print

Address Apt.

City State Zip

The Science Fiction Book Club offers its own complete hardbound editions sometimes altered in size to fit special presses and save members even more. Members excepted in U.S.A. and Canada only. Canadian members will be serviced from Toronto. Offer slightly different in Canada.

Fantasy and Science Fiction

Including Venture Science Fiction

SEPTEMBER • 26th YEAR OF PUBLICATION

NOVEL

MICHAELMAS (2nd of 2 parts)	ALGIS BUDRYS	40
-----------------------------	--------------	----

NOVELET

SAROS	HERBIE BRENNAN	6
-------	----------------	---

SHORT STORIES

THE LADY AND THE MERMAN	JANE YOLEN	37
THE P FACTOR	CURT SIODMAK	99
MILTON INGLORIOUS	ROBERT F. YOUNG	121
THIS OFFER EXPIRES	LIZ HUFFORD	150

DEPARTMENTS

BOOKS	BARRY N. MALZBERG	30
FILMS: Blood Doesn't Go "Arf!"	BAIRD SEARLES	96
CARTOON	GAHAN WILSON	119
STARDANCER (verse)	TOM RAPP	120
SCIENCE: To The Top	ISAAC ASIMOV	138
ACROSTIC PUZZLE	GEORGIA F. ADAMS	158

Cover by David Hardy, "Hitch on Pioneer II"

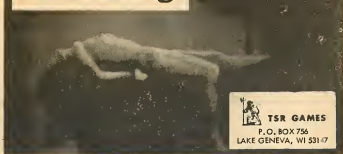
Edward L. Fermon, EDITOR & PUBLISHER
Dale Beardale, CIRCULATION MANAGER
Anne W. Deraps, ASSISTANT EDITOR

Isaac Asimov, SCIENCE EDITOR
Audrey Fermon, BUSINESS MANAGER

The Magazine of Fantasy and Science Fiction, Volume 51; No. 3, Whole No. 304, Sept. 1976. Published monthly by Mercury Press, Inc. at \$1.00 per copy. Annual subscription \$10.00; \$11.00 in Canada and Mexico, \$12.00 in other foreign countries. Postmaster: send form 3579 to Fantasy and Science Fiction, Box 56, Cornwall, Conn. 06753. Publication office, Box 56, Cornwall, Conn. 06753. Second class postage paid at Cornwall, Conn. 06753 and at additional mailing offices. Printed in U.S.A. Copyright © 1976 by Mercury Press, Inc. All rights, including translations into other languages, reserved. Submissions must be accompanied by stamped, self-addressed envelope. The publisher assumes no responsibility for return of unsolicited manuscripts.

YOU ENTER A WORLD OF ...

**Swords
&
Sorcery**



**WHEN YOU ADVENTURE INTO THE STRANGE
AND FANTASTIC PLACES AWAITING IN**

DUNGEONS & DRAGONS

The original game of fantasy role-playing, **DUNGEONS & DRAGONS** is an open-ended game which allows participants to assume such roles as wizards, heroes, elves and dwarves. The "Dungeon-Master" guides them through labyrinths inhabited by horrible monsters and into unknown lands in search of fabulous treasures. Enchanted weapons and mighty spells help them to combat dragons, trolls, and even demons. Success will allow these adventurers to grow more powerful, but doom awaits at every turn.

And to find out the latest on fantasy games subscribe to **THE DRAGON**. The Magazine of Fantasy, Science Fiction, Swords & Sorcery - color cover and interior art on glossy paper with top-name gaming and literary authors. Bi-monthly; mailed first class.

**A TRULY UNIQUE GAME WHICH
ALLOWS YOU TO UNLEASH
YOUR MIND AND IMAGINATION
AND YOUR FANTASY
WORLD TO SPRING INTO LIFE!
FOR 3 OR MORE ADULTS**

ORDER FORM

TSR GAMES, Dept. FF, POB 756,
Lake Geneva, Wisconsin 53147

PLEASE RUSH THE FOLLOWING TO ME:

— Copies of Dungeons & Dragons Medieval
Fantasy Game Playable with paper and
pencil at \$10.00 ea.

— 6 Issue Subscriptions to the Dragon
Magazine at \$ 9.00 ea.

Name _____

Address _____

City _____ State _____ Zip _____

No C.O.D. orders, please. Wisconsin residents must
add 4% sales tax. Overseas information upon request.

Herbie Brennan ("Mammoth," April 1974) returns with a suspenseful tale about a team of archaeologists, who in the course of a dig in a pyramid to inspect for bomb damage, discover something else, something quite remarkable.

Saros

by HERBIE BRENNAN

Foster arrived from Cairo with the morning papers while the other members of the dig were breakfasting. There was the usual flurry of excitement and afterwards a little desultory conversation about the situation in Damascus. Lady Alice, who read Arabic, reported *El Alahram* as claiming the crisis had deepened "due to Israeli intransigence." But things looked far less serious from the uninvolved standpoint of yesterday's *Times*, and Mountcharles was soon hunting for the latest Test score. His mind was elsewhere in any case. Lately he found it very difficult to concentrate on anything outside his work. It was the effect of 5,000 years of history looking down on him.

As soon as he could decently excuse himself, he left the table to wander out beyond the small encampment to the workmen's quarters snuggled tight against the east face of the pyramid. They were

lazy scoundrels, of course, half of them still asleep, although they had contracted to being work at sunrise. There seemed to be no way of ensuring efficiency without European supervision. But the Europeans — with the possible exception of Lady Alice — soon wilted in the heat. Fortunately the problem would cure itself once they reopened the pyramid passages, but until then.... He frowned, toying with the feasibility of working only after sunset, using searchlights. It would mean a larger generator, which could eat quite deeply into their budget. Besides, the Egyptian government was very wary about showing lights at night, even though the Israelis claimed the last raid had been "a mistake."

He stared up at the towering edifice and marveled at how little real damage had been caused. On the Giza Plateau any craters had

already filled with sand. The pyramids of Chephren and Mycerinus had escaped several near-misses totally unscathed. Even the direct hit on the Pyramid of Cheops seemed only to have scratched the surface of the monster. Although what the situation might be like inside was something else again.

Mountcharles found Mohammed Isa and kicked the old boy's backside until he went off grumbling to get the work teams on the job. It was damnably expensive using human labor, but neither Mountcharles nor his advisors could see any alternative. Heavy machinery could not climb the steep face of the pyramid, and the rather more obvious androids were out of the question: particles of fine sand whipped up by the prevailing wind wrecked their delicate control systems inside hours. It might be different once the passages were open, of course, and he had a small team standing by in storage at the Cairo University.

The men began to scale the north face of the pyramid and soon the hoists were dropping down their baskets full of rubble. It was a primitive system, probably little advanced from the days when the pyramids were built, but remarkably efficient. When he was reasonably sure work would not stop the moment he turned his back, he walked back to the camp

and the ending of some sort of argument between Harris and Lady Alice. It looked as if it had been a grossly uneven contest.

"My dear child," Lady Alice was saying as he came within earshot, "the only *reason* the Egyptians hired us was *because* we know a great deal more about their ancient history than they do. It would hardly do to start kowtowing in circumstances like *that*."

The "dear child," who could scarcely have been more than ten years younger than Lady Alice herself, started to reply, but she was already walking away. He turned to Mountcharles and spread his hands in a helpless gesture.

That evening Mountcharles walked with Lady Alice beside the Pyramid of Cheops. It was a still, cool Egyptian night, full of the scents of history. They stopped to stare up at the world's most famous mystery.

"Nearly two and a half million blocks of stone," Mountcharles remarked. "And not one under two tons' weight."

"That was Petrie's estimate, wasn't it?" Lady Alice asked.

He nodded. The pyramid cut a deep black triangle against a darkening night sky.

"I've always felt it might be on the low side," Lady Alice said. "I wonder how they built it."

Mountcharles glanced at her,

surprised. "But we know how they built it, my dear. The Euwe Papyrus solved that little mystery once and for all."

"You have a touching faith in ancient documents. The Euwe Papyrus dates from the Seventeenth Dynasty — that's nearly a thousand years after the pyramid was built. Besides, I think the damn thing's a forgery."

"Do you?" Mountcharles asked. "Do you really?"

Lady Alice shrugged. "Oh, I don't suppose the old goat actually wrote it himself — although I've always thought him capable of anything after what he did to those Mesopotamian fragments." She started to walk on, slowly. "No, it's his *interpretation* that worries me. If you find a papyrus in umpteen thousand little pieces, the way you put it together can affect what it says. And the way you fill in the blanks. I've always thought the papyrus story was far too close to orthodox opinion: winter relief work for the peasants... rafts down the Nile... ropes and muscle power. Surely *some* of our guesswork must have been wrong?" She shrugged again. "But then Euwe's such a rigid old conservative that would never occur to him."

Mountcharles, who was painfully aware a younger generation of Egyptologists considered him a rigid old conservative as well, said

carefully, "You still think we haven't solved the puzzle then?"

"I remember talking to an engineer," said Lady Alice. "He told me we'd have trouble duplicating a structure like that today, even using atom power and androids. It just doesn't tie in with muscle power and ropes."

Mountcharles smiled tightly to himself in the half light. "You would have enjoyed von Daniken."

"Who?"

"A little bit before your time, my dear. He was a very popular author in my father's day. He was so taken by the mystery of how they built the pyramid, he actually concluded the Egyptians didn't manage it at all. They were helped by visitors from Outer Space." He frowned. "Or was it Atlanteans?" The frown changed back into a smile. "I'm afraid I haven't studied him too carefully, being —" He coughed. "— something of a rigid old conservative myself."

Lady Alice took his arm affectionately. "You're not so old or so conservative that your brain has petrified like Euwe's. Anyone with half an eye can see there are things about the pyramid we haven't come close to explaining. Never mind how it was built — what was it built *for*? We still insist on telling students it was Cheops' tomb, but *cherchez la mummy*. There wasn't even a sign of one when Caliph Al

Mamun's men broke in at the beginning of the Ninth Century — and they had to cut through granite blocks to get to the king's chamber."

"No mummy," Mountcharles agreed. "But a sarcophagus all right. It would strike me that was a reasonable indication the structure was built as a tomb."

"I suppose you're right," Lady Alice sighed in a tone that suggested she didn't believe a word of it. "It's just that the more I study the Ancient Egyptians, the more I consider them a very unusual people."

"I think most of us have that feeling," Mountcharles said. They turned back towards their separate sleeping quarters in the camp.

It was a soft beginning to a task which soon became a nightmare.

TWO

With all the enthusiasm of the truly naive, McCartney had drawn a diagram of the inner structure of the pyramid and was lecturing on it with enormous gusto. Mountcharles drifted onto the periphery of the little group, wondering vaguely why archaeologists of the caliber of Foster and McNeill — or even Harris, for that matter — put up with such innocent arrogance. To his intense surprise, he noticed Lady Alice in the audience as well, listening with undivided attention.

"This, of course, is the basic section looking west," McCartney was saying. "Now here —" He pointed to the entrance tunnel plunging downwards from the right of his diagram. "— is where our men are working now. The Egyptians have calculated that the stress factors caused by the bombing should not have extended the blockage much beyond here —" He indicated a point midway between the tunnel entrance and the spot where it branched upwards to join the grand gallery and the king's chamber. "You'll notice I haven't drawn in the corridor to the queen's chamber, or the queen's chamber itself. That's because we're virtually certain the bombing could not have affected them." He reached up to place an X on the pyramid surface above the entrance tunnel and almost directly opposite the king's chamber. "This is roughly where the bomb struck. Egyptian intelligence sources suggest the Israelis were using the new Margulies explosive, which has an energy release factor —"

"You haven't drawn in the rest of the entrance tunnel either," Lady Alice said abruptly.

McCartney blinked at her. He seemed surprised at the interruption. "I'm sorry?"

"The entrance tunnel doesn't just fork upwards the way you've shown it," Lady Alice said. "It goes

straight down through the bedrock of the plateau for about three hundred and forty feet. Then it levels off and leads into another chamber."

Frowning, McCartney said, "You mean the chamber with the pit?"

"Yes."

McCartney still looked puzzled. "But that whole area is far beyond the possibility of bomb damage."

"I know."

It was fairly obvious McCartney was wary of provoking one of Lady Alice's notorious outbursts. He said carefully, "I assumed in that case it could be of no interest to us."

"You assumed wrong," Lady Alice snapped. She stood up and walked away abruptly. Grinning, Mountcharles moved to follow her. He was intrigued to find out what had lain behind the little scene.

He caught up with her at the entrance to her tent. She rounded on him before he could speak. "That man's an idiot!"

"McCartney? Yes, I suppose he is," Mountcharles agreed mildly.

"Oh God," Lady Alice said. "You're not here to soft-soap me, are you?"

Smiling, Mountcharles shook his head. "I was just wondering why you were so interested in the underground chamber, that's all."

She glanced at him almost archly. "It's part of the pyramid's

interior structure, isn't it? We're supposed to check *all* internal chambers for damage, no matter what McCartney says about his damned energy release factors."

But Mountcharles continued gazing at her steadily. "It's just a rough, unfinished little room with a hole in the floor. It's still half full of blocks from the Vyse and Perring excavations back in 1838. There's not a chance we'd even *notice* bomb damage down there. Not that there's the slightest chance of damage in the first place — that chamber's deep enough to stand up to anything except tactical atomics."

"All right," Lady Alice smiled, "there's more to it than that. Come inside a minute — I'd like privacy before we start discussing this."

She disappeared inside the tent, but as Mountcharles moved to follow, Harris came thundering out of nowhere with the news that two native workmen had died in a cave-in at the entrance tunnel.

The representative of the Egyptian Ministry for Antiquities was very suave, Westernized and politically aware. After they had inspected the accident site together, he sat opposite Mountcharles in Mountcharles' tent, sipping the revolting coffee all Egyptians seemed to favor and analyzing the delicacies of the situation.

"One must appreciate, my dear Lord Mountcharles, that some capital will be made of this by the internal opponents of my government's policies. In a sense, one might even say your own nationality is unfortunate."

Mountcharles, who had disliked the man on sight, grunted sourly.

Kamil raised one hand languidly, as if to block possible objection. "We all of us must carry regrettable political legacies from the past. No matter how much goodwill Egypt may show today, the Israelis still remember Egyptian actions when their state was set up. No matter how warm relations between Egypt and His Majesty's government may be today, Egyptians still remember Britain's imperialistic past. One can envision the propaganda possibilities to be had from a British aristocrat's involvement in the deaths of two Egyptian workers."

It struck Mountcharles as simplistic rubbish. He allowed one eyebrow to crawl upwards. "Even when the British aristocrat is here on the express invitation of the Egyptian government?"

Kamil smiled. "That makes it worse. As I said, the propaganda possibilities may be seized by *opponents* of the present government."

Mountcharles dropped diplomacy down the nearest drain.

"Surely, Mr. Kamil, this is a danger we have to face, whatever happens. After all, there are those who might suspect this whole operation is a propaganda exercise."

"You think so?" Kamil asked.

"Oh, I do," said Mountcharles.

"I do indeed. World opinion was very unhappy when the Israelis bombed the pyramids in the first place; claiming the raid was a mistake doesn't help in the slightest. I'm sure the Egyptian government must have carefully calculated the effect of calling in an independent team of archaeologists to assess the damage. Especially if our report happens to show internal damage has been extensive."

To Mountcharles surprise, Kamil smiled. "I see we understand one another, Lord Mountcharles. Not that I would dream of suggesting you weigh your final report in any direction, of course. But my government does feel the whole area is particularly delicate and should not be marred by any hint of controversy." He stood up. "All I am asking is that you be careful — exceptionally careful. An accident is an accident and doubtless will be soon forgotten. But we really cannot afford another — or indeed any incident which might prove controversial."

"Quite," Mountcharles said tightly.

"After all," Kamil remarked, "the situation has benefits for both sides. This is the first full-scale archaeological survey of the Great Pyramid that my government has permitted for almost forty years."

"I know," Mountcharles said. "I was on the last one."

Mohammed Isa and his men broke down through three days later, and by the middle of the fourth day the entrance to the passage was propped and safe. At first news of the breakthrough, Mountcharles brought the androids up from Cairo but did not unpack them. McCartney and Foster were the first archaeologists actually to enter the pyramid, and they returned, almost two hours later, to report there had been no obvious structural damage to the interior. It was pleasant to hear but did not mean a great deal. They had been surveying only gross damage — and that with the aid of small battery lamps. Power cables had to be run in, proper lighting established and careful measurements taken. Only at that stage could real damage — or lack of it — be accurately assessed.

Mountcharles made his own preliminary survey later that afternoon, accompanied by Harris and Lady Alice. They had little conversation in the entrance corridor, largely due to the discomfort of

bending almost double to negotiate the low ceiling. But the corbel vaulting of the grand gallery, ranging more than twenty feet above their heads, allowed an upright stance again. Harris struck a luminescent rod, its bacteriological light source far more powerful than the lamps Mountcharles carried. Its cool blue radiance threw the first third of the gallery into high relief and stopped both his companions short.

"I've always thought," Mountcharles remarked quietly, "that this was just as much a wonder of the ancient world as the pyramid itself."

They moved along it slowly, their awe tempered by the need to ensure the structure was still sound. Certainly, as McCartney and Foster had said, there was no easily apparent damage; but earlier calculations had shown the gallery particularly susceptible to stress following the bombing. Eventually they reached the high step which marked the entrance to the low, narrow little corridor leading to the king's chamber.

In the chamber itself, both Harris and Lady Alice examined the famous sarcophagus of chocolate granite, while Mountcharles moved to one corner to examine the state of the almost equally famous roof slabs which had already been loosened, presumably as the result

of an earthquake. Highlighted by the luminescent rod, they seemed as perilous as ever... but at least no more perilous than ever. His reservations remained: naked-eye observations were almost useless in a case like this.

"Queen's chamber next?" he suggested when they seemed to have done all they could do.

"I'd like a look at the underground chamber," Lady Alice said; and though the tone was casual, something in her voice alerted Mountcharles instantly.

With barely a second's hesitation, he said, "I think I might come with you. Do you mind having a look at the queen's chamber yourself, Harris?"

"No," said Harris, puzzled. "No, not at all."

They retraced their steps to the entrance tunnel, then plunged downwards, still bent double. The corridor leveled abruptly, and a few steps further on, they were in the chamber which held such fascination for Lady Alice. Mountcharles stood upright gratefully and looked around. In the dim light of his lamp, the room was exactly as he remembered it: roughly finished and claustrophobically cluttered with the excavation refuse from the Victorian expedition of Howard Vyse. There had been some attempt at clearance by the Putman team — the survey on which Mountcharles

had cut his archaeological teeth forty years before — but it had not been noticeably successful. Androids had not been perfected then, of course, and even laser technology was in its infancy.

"One of the less interesting features, I'm afraid," Mountcharles remarked. Then, in an attempt at levity: "Be careful not to fall into the pit."

But Lady Alice was scarcely listening. She ran her fingers over the rough-hewn walls as if they had been cut from gold.

On impulse, Mountcharles asked "What's the fascination for this chamber, Alice?"

"It's the key to the whole pyramid mystery, Mount," she told him quietly. He waited, and when he had almost given up hope of her enlarging, she added: "At least, according to one old source I've come across."

The warning bells began to sound in Mountcharles' mind again. If Alice had really unearthed a new Egyptian document, it could be of immense value in itself, quite apart from any light it might shed on the pyramid. But why on earth had she kept it secret?

"This is a new source?" he asked.

"Yes."

"Papyrus or stele?"

She hesitated. "It's not Egyptian. It's Greek."

For some reason it hit him in a rare surge of intuition. "Herodotus?"

She nodded. "Yes."

Mountcharles stared around the chamber in agitation. "This is the story about the vaults beneath the pyramid — the subterranean vaults?"

"Yes."

"But, my dear girl, we know that isn't true. Damnit, old Herodotus didn't even vouch for the story himself; he only reported having heard it from some damn romantic mystery-monger. Vaults beneath the pyramid and Cheops mummy on an island? It's never been accepted as history, not even approaching history."

What bewildered him was that Lady Alice seemed to be taking the theory so seriously.

"Herodotus did vouch for it."

"Not in his extant works," Mountcharles said.

"No, but last year Professor Schroeder translated some interesting Greek fragments. Very early material — a third-or fourth-hand copy of Herodotus. It's incomplete, but Herodotus does apparently claim first-hand proof of the subterranean vaults."

Frowning, Mountcharles asked, "Is this Schroeder of Munich?"

"Yes."

"What does he know about Egyptology?"

"Nothing — that's the point. His paper on the new fragments isn't published yet. He only happened to mention it to me a few months ago because I made some chance remark about Cheops. He doesn't feel the fragments are important at all outside the Greek context."

Mountcharles sighed. "I'm afraid neither do I. If there really is a subterranean vault, we're in it now — 46 feet by 27 by 11, according to Vyse's measurements. It's not exactly the vast cavern Herodotus heard about."

"We're not standing in it," Lady Alice said softly. "I believe we're standing above it."

THREE

Work went smoothly for the better part of a week, mainly due to the androids. Inside the pyramid, protected from the blowing sand, they operated flawlessly, storing away unit after unit of information in their miraculous bionic brains. The Europeans were relegated to observing and directing. Power cables snaked along the pyramid corridors, and the internal chambers blazed with light. Mountcharles dismissed all but a handful of the native workmen and spent more and more of his time with Foster analyzing the incoming information. Harris predicted the whole operation would be complete inside

another seven days.

Then Mountcharles found the lasers.

He was searching for something else entirely — a portable power pack for one of the stand-by lighting units. An unmarked crate in stores aroused a little worm of curiosity, and he opened it to find a complete laser excavation kit, blade-beam stonecutters, high-intensity diggers, sifters, tunnel finishers, accessories and power source, all (by the look of it) unused, all utterly useless for the work currently on hand, all costing around a quarter of a million unit DMarks. He stared at it for a moment in total bewilderment, then went angrily in search of McCartney, who was in charge of group inventory.

But McCartney, it transpired, knew nothing of the kit. He looked at Mountcharles blankly. "But we don't need lasers on this job," he said unnecessarily. "Why on earth should I order them?" As people do in such situations, they both returned to stores and inspected the mystery crate. They unpacked it carefully, looking for some clue to its origin, an invoice, delivery note, or something of that sort. There was nothing. The equipment itself was perfectly orthodox, Bulgarian-made, and operating on the new synthetic crystals.

They were repacking the case

when Foster happened by.

"I don't suppose you happen to know anything about this?" Mountcharles asked him.

Foster gave the case a cursory glance. "It's laser excavators. Alice Mobray had them brought in yesterday."

"Lady Alice?" asked McCartney.

"Yes."

"What on earth does she want with laser equipment?" Mountcharles asked.

Foster, who did not get on particularly well with Lady Alice, shrugged. "Talk to her about that."

Mountcharles did, that evening after supper. He found her, after a considerable search, in the pyramid itself, in the underground chamber. She was consulting an android.

"...weight distribution is the key factor," the android was saying. "Only a pyramid shape would allow such a possibility."

"Compute stability on the figures given," Lady Alice said. "Begin with —" She stopped as she saw Mountcharles.

"Well," Mountcharles said mildly, "what brings you down here again, Alice?"

She smiled, a little wearily. "Just something I wanted to check out, Mount. I can never seem to get an android to myself during the day." She pushed a whisp of hair

back from her forehead. "And what brings *you* down here. I'd have thought you would be enjoying a quiet gin by now."

"No rest for the wicked," Mountcharles said philosophically. "I was looking for you, actually."

"How flattering."

There was an edge between them and he did not like it. With something more than usual bluntness he asked, "Why did you order laser equipment, Alice?"

She hesitated. "Is that really your affair, Mount?"

"Damn sure it's my affair!" Mountcharles retorted angrily. "I'm responsible for the budget on this little jaunt. Laser excavators are expensive."

"I know. I paid for them out of my own pocket."

Deflated, Mountcharles said, "Oh."

All of a sudden, the barrier between them shattered. Lady Alice walked across and gripped his hand. "Mount, I *need* those lasers. We're standing on top of the most important Egyptological discovery since Carnarvon opened Tutankhamun's tomb."

"Alice, Alice...." Mountcharles shook his head. "You're not still convinced there are underground vaults?"

"Convinced? I can prove it!" She whirled round and signaled to the android. "Repeat stored data

on echo soundings."

"Echo soundings show patterns typical of cavern formation at depth of approximately thirty-seven to fifty-five feet beneath this chamber," the android said. "Data is insufficient to compute extent of these formations."

"You see?" Lady Alice said excitedly.

Mountcharles sighed. "I don't see anything. The android is simply saying there *may* be caves of some sort in the bedrock of the plateau." A thought struck him. "How did you get these echo soundings?"

"I exploded a small charge in the pit."

"You *what*?" Mountcharles asked, appalled. "Don't you know the dangers of a cave in?"

"It was a *small* charge," Lady Alice repeated.

"Good God, woman, how do you think the Egyptians are going to react if they find we've been letting off bombs *inside* their precious pyramid?"

"Not a bomb — just a small charge."

"Where was the android while all this was going on?" Androids were more expensive than lasers.

"Here, in the chamber. It was quite safe."

Mountcharles buried his face in his hands. "Alice, I'm completely at a loss for words."

"Try 'contragulations,'" Alice

suggested. "This expedition may be on the verge of the greatest discovery archaeologists have ever made."

"Alice, none of this makes sense. If there is a cavern underneath this area, how on earth did the Egyptians build it?"

"I don't know," Lady Alice said. "I don't even know how they managed to build the pyramid. Maybe they didn't have anything to do with it. Maybe it's a natural cave formation they took over and used."

"Look," said Mountcharles patiently, "if they intended to bury the Pharaoh in a cave, why bother to build the pyramid at all?"

Lady Alice shrugged. "To mark the spot? How should I know? My own theory, for what little it's worth, is that the pyramid is a massive exercise in the art of misdirection. We know how concerned the Pharaohs were with making sure their bodies weren't disturbed. Perhaps Cheops ordered the pyramid built to distract grave robbers. By the time they cut through to the king's chamber and found nothing there, they would be too dispirited to look any further — more likely they would imagine someone had beaten them to it. What better way to preserve the real tomb than building an elaborate dummy? If I'm right, the bluff has worked for five thousand years."

"That's a weak theory," Mountcharles said. "It must sound weak even to you."

"It's no weaker than the orthodox theories about the pyramid. A tomb without a mummy and no sign it ever held one?" The fire went out of her voice and she became serious. "Mount, I intend to use the laser equipment to drill down through the bottom of the pit. If there is a cavern, we'll find it in hours."

"No," said Mountcharles decisively.

"I'm not talking about a shaft," Lady Alice told him. "I'm talking about a bore hole two inches in diameter maximum. When it breaks through, we can feed down a photographic sensor. With photographic evidence, we can be sure of getting government permission to sink a shaft. If there is no cavern, or simply a natural cave formation with no artifacts, then we seal up the bore hole and forget it. If we keep this between ourselves and use androids, no one would be any the wiser. What do you think?"

"Positively not," Mountcharles said decisively. "I cannot condone that plan under any circumstances whatsoever!"

Lady Alice smiled at him.

Mountcharles watched the operation with mixed feelings. He was still wondering how he had let

himself be persuaded to agree to it, still deeply concerned about the percussions should the Egyptian government ever learn he had exceeded his instructions in the most cavalier fashion imaginable. Despite Lady Alice's enthusiasm, he had no faith in the possibility of discovering anything of interest. He was sixty-two years old, but he felt, in that rough-hewn chamber deep beneath the pyramid, like an errant schoolboy. Some imp within his mind read him imaginary headlines from the sensational Sunday press. *Aged Egyptologist's Midnight Tryst With Blonde Beneath The Pyramid.* "We were looking for a mummy," says Mountcharles. It hardly bore thinking about.

"Breakthrough," said the android tonelessly, switching off the laser. It stood up, presumably waiting for the drill hole to cool.

Lady Alice glanced across at him with barely suppressed excitement. "I knew there was a cavern down there."

"That doesn't mean there's anything in it," Mountcharles cautioned drily.

"Don't be such a kill-joy," Lady Alice said. "Where's your imagination? Where's your enthusiasm? Where's the thrill of possible discovery?"

"Buried under all my worries." He glanced over his shoulder involuntarily. He had a genuine

horror that some other member of the team might come upon them. He had even insisted on working by torchlight, although it was utterly impossible for even a luminescent rod to show outside the cluttered little room.

"Lowering the photographic sensor now," the android said. It began, with casual efficiency, to feed a slim, metallic cable down the drill hole.

"My God," Lady Alice said, "can you hear my heart?"

"No."

She came over to sit beside him on one of the stone blocks. "Mount, I'm terrified."

In a sudden burst of sympathy, he took her hand. He was, after all, committed now, and it was pointless pretending otherwise, even to himself. "The worst that can happen is that we'll find nothing," he told her quietly. "If that happens, we simply repair the damage, deprogram the android and steal away."

"I'm frightened we'll find nothing," Lady Alice told him. "I think I must have been mad."

"Sensor operating," the android interrupted. "Do you require visual print-out or electronic data storage?"

"Visual print-out," Mountcharles said.

The android pushed the free end of the cable into the print-out

console and threw two switches in succession. The photographic strip began to roll out almost instantly. Mountcharles took a deep breath, then stood up to examine it. The first four frames were blank, the fifth and sixth showed featureless rock structures. He slid the strip through his hands and played the torch beam on the later frames. After a moment, beyond all possibility of control, his hand began to shake.

FOUR

Four hundred years before the birth of Christ, Herodotus had described the vaults beneath the pyramid. They were, he claimed, a series of massive man-made caverns, their size matching that of the pyramid itself. The high rock domes towered above an artificial lake, fed by a subterranean channel cut to the Nile. On an island in the center of the lake, in a sarcophagus of gold, lay the embalmed body of the Pharaoh called Cheops. His funeral boat, richly carved and packed with gemstones, foodstuffs, weapons, household ornaments and other necessary provisions for the Afterlife, was anchored by the island shore. It was a romantic picture.

Mountcharles squeezed out of the shaft in total darkness and gripped the rungs of the flexible

ladder convulsively. "Light!" he called down to the android. The damn things never thought to use lights on their own; it came of being able to "see" in the dark.

A luminescent rod glowed, flared, then stabilized. Mountcharles relaxed his grip a little and climbed on. With light, it was no longer nervewracking. He had only a short way to go, and the android was steadying the bottom of the ladder. As he stepped off, he could feel the faint vibrations which indicated Lady Alice had now started after him. She was supposed to wait until he called, but he felt no surprise that she had not.

Mountcharles looked around. He was in a cave only a little larger than the king's chamber. It seemed to be a natural formation, although the floor had been worked in places, presumably to leave a more even surface. The cave was almost empty. Two thick granite pillars reared up a few yards from where Mountcharles stood, probably as roof supports. There was nothing else of interest until the eye fell on the walls. Niches had been cut at regular intervals. In each niche was an urn. It was all a far cry from Herodotus, but Mountcharles could hardly have been more excited.

Lady Alice emerged from the shaft and swung down the ladder with the natural ability of an

acrobat. She stepped off and stared around, delighted. "My God, Mount, I don't know what we've found, but we've certainly found something." She put her hand on his arm. "There must be nearly fifty jars."

"Let's not get too excited until we're sure there's something in them," Mountcharles cautioned. Although even a find of some fifty well-preserved urns would be something in itself.

He turned to walk towards one of the niches as Lady Alice instructed the android: "Give me a light survey on content of the urns." Mountcharles paused. His generation was far less accustomed to androids than hers; he kept forgetting what they could do.

After a moment the android said, "Contents of varying density. Some jars may be empty."

"What technique did you use?" Lady Alice asked.

"Ultrasonic analysis."

Lady Alice nodded to Mountcharles. "The empty jars may in fact contain papyri — it wouldn't show." She walked over to the nearest niche and very carefully reached for an urn. After a moment she said, "This is really heavy — can you help, Mount." It would have made more sense to ask the android, but there was a certain sense of propriety involved in archaeological discovery. It was

bad enough having the android first into the chamber.

The urn was very heavy indeed. Together they eased it out of the niche and onto the floor. The neck had been stoppered and sealed.

"What do you think's inside?" Lady Alice asked.

"Oil," Mountcharles said succinctly. "I've come across this type of urn before. Fill it with heavy-gravity anointing oil and it weighs a ton. I'd definitely say oil in this one and probably in the others the android marked as high density."

"What about the rest?"

"Empty. Or as you suggested, papyri." He was refusing to allow himself to become too excited. Or at least to let it show.

Some of the initial excitement was draining out of Lady Alice too. "I suppose it's pointless making much more than an initial survey. We'll need the rest of the team down to tackle the urns themselves."

An errant thought that had been hovering below the surface of Mountcharles' conscious mind burst abruptly to the surface. "I think we should try to find the entrance."

Lady Alice glanced upwards automatically, then caught herself. "Yes, of course. They wouldn't have come down through the roof the way we did." She hesitated. "Or would they?"

"No," Mountcharles said, "I wouldn't think so." The most likely possibility was a tunnel, probably blocked off by granite plugs after use, like the entrance passage to the pyramid. He walked across the floor with no definite plan in mind, thinking vaguely that the tunnel might become apparent. As he walked between the twin stone pillars, the light went out.

He heard lapping water. There was a staggering moment of confusion before he found himself standing on the shore of a vast, dark lake. Grey-black stone towered above him like the dome of some immense cathedral. He was still underground, yet he could see: a pale, polarized light with a bluish tinge illuminated the entire area. He searched briefly for its source, but could not find one. He shivered and stepped back involuntarily from the water's edge.

Mountcharles turned. There was no sign of the pillars, no sign of the chamber with its niches and its urns. "Alice!" he called sharply. The sound reverberated hollowly.

He fought down a mounting panic. Whatever had happened, he still seemed to be in one piece. A blackout? It seemed logical, but how had he got here? And where was he anyway? And where were the others — Lady Alice and the android at least?

"Alice!" he called again, louder this time. There was no answer but the echoes of his voice.

Mountcharles sat down on a spur of rock and thought. Eventually a reasonable progression of events emerged. He had indeed blacked out, perhaps for no better reason than that he was getting too old for the type of pressure represented by the current project. Alice would have seen his difficulties the moment she had the light working again. She would have instructed the android to use its medical sensors, perhaps administer first aid. In the process they had discovered the entrance to this place. By then the android's sensors would have found him in no real danger, and Alice, impulsive as ever, would have instructed it to carry him into the larger cavern. He smiled slightly to himself. She had never been one to allow a little emergency to interfere with her explorations.

And so here he was. But where was Alice? And where was the entrance from the smaller chamber?

He looked around again, and this time there was no dampening his growing feeling of excitement. The cavern was too vast to be man-made, but that did not mean it could not have been man-used. He was struck by the similarity of the place to the description handed

down by Herodotus. No wonder Alice had been unable to hold back; it must have looked like the confirmation of her most romantic theories.

The absence of a noticeable light source was extremely puzzling. Perhaps there was a natural luminescence in the rock itself — some form of mild radiation, or microbes of a simliar species as those used in the luminescent rod.

What to do now? Alice had obviously gone off exploring with the android. Presumably they had expected him to remain unconscious for longer than he had done. They might, it would appear, return any minute. But if they did, that would be an end to Mountcharles' own opportunity to explore. He smiled to himself again, left a marker on the spur of rock and strode out along the lake shore. Despite his blackout, he felt fitter than ever.

In a little while, to his amazement, he found a boat. It was guarded by two rows of life-size wooden spearmen, their painted coloring faded with age.

Mountcharles felt his heart thumping as he examined the figures. They were in a truly remarkable state of preservation: almost unbelievable, in fact, considering the humidity the presence of the lake would create. They stood, spears in their right hands,

shields in the left, left foot forward, staring blindly inland at his hesitant approach.

The boat itself was less impressive. He recognized the design at once — a simple Egyptian fishing boat, shaped for all the world like a half-eaten wedge of melon. There was a line of hieroglyphics painted on the side. He walked between the line of soldiers and knelt down to read them. It was a difficult task, for the waters had not been so kind to the paintwork of the boats as they had been to the soldiers, and several of the symbols had been all but obliterated. He could just make out the little golfing flag which represented God. Beside it the wavy lines that symbolized water; and linked to them that curious sign composed of parallel lines divided, which meant a road, or the act of traveling. He could make no sense of it. There was the circular sun symbol which meant day. Something almost obliterated; then the character for the Nile; followed by the trident sign which meant a plant; and something which could have formed part of a larger symbol, now obliterated, or might be a complete hieroglyphic in its own right: the three drops representing ears of corn.

He turned it over in his mind, and his mind presented him with the possibility of a linkage. If the sun sign was taken in its secondary

meaning of "time" rather than "day," the phrase might read something like: *The road to God is open at the time when the Nile brings an abundance of plants and corn.* But where did the water sign fit in? It might refer to the annual Nile floods, but it seemed to be positioned wrongly for that. The *water-road*? It was possible. *The water-road to God is open...?*

Mountcharles frowned. The "abundance of plants and crops" would certainly be at the time of the Nile floods, but the Egyptians did not often put it like that. The Nile floods brought the water and the mud necessary for harvest, but *abundant* harvest? A memory burst into consciousness and he had it. The *Saros*! It had to be the *Saros*. Egyptian astrologers believed the eighteen-year *Saros* cycle brought greater flooding of the Nile and thus abundant harvests. So, *The water-road to God is open at the time of Saros*! Obscure, but no more obscure than most religious utterances of the ancient Egyptians.

And something like a chill ran down Mountcharles' spine. The Pharaoh was, of course, the embodiment of God. Not a pious utterance! Not a pious utterance at all! He recalled Herodotus: the mummy of the Pharaoh on the island. The *water-road to Pharaoh's tomb*! It had to be! No, of course it did not have to be, but it

was possible. It was possible! His mind tumbled with thoughts. An island in the lake, as Herodotus had described. The pale light was not strong enough for him to see, no matter how he strained; but there *could* be an island there!

He no longer had any rein on his excitement. Everything was falling into place. The boat and wooden soldiers proved conclusively the Egyptians had known of this cavern and used it. Herodotus had obviously heard of it, perhaps even seen it, if Alice's Greek manuscript was to be believed. In an explosion of frustration, he tried to calculate the probabilities of anything remaining of the tomb. There were so many factors. Could a mummy survive so long on the island. Egyptian embalming techniques were magnificent, but the dry climate helped enormously. Could those techniques manage to preserve a body against the humidity on the island? And if preserved from nature, was it still preserved from grave robbers? Suddenly the Greek manuscript became very important. If Herodotus had actually seen the cavern, others must have known how to reach it. And if the entrance was known, then surely the tomb would have been robbed. Yet Herodotus maintained that the body of Cheops was still there in his day. But Herodotus had died more than two

thousand years ago. So much time....

The timbers of the boat seemed sound. Obviously the wood had been specially treated or it would have perished long ago. Amazing people, the Egyptians. A culture obsessed by the preservation of materials against the ravages of time.

If the boat survived, the mummy would surely have survived?

Carefully he stepped into the boat itself, testing his weight on the timbers cautiously. The boat bobbed, but his initial impression had been correct: it was still sound. He moved carefully to the prow, searching for oars. There was no sense of movement, but when he turned, he discovered the little craft had drifted out from shore.

There must have been a current running, for, without oars, the ancient fishing boat carried him directly to the island in the center of the lake. Perhaps that was what the inscription had meant — the "water-road" was a current which only ran at the time of Saros. Was this a Saros year? He seemed to remember some vague scientific verification that the Nile did indeed run higher over an eighteen and a half year cycle, roughly corresponding to the Saros, although what caused the cycle was obscure. If the

Egyptians had cut an underground channel from the Nile to this subterranean lake, it was entirely possible that they had contrived a current which would only run at certain times.

The boat beached. Mountcharles stepped out and made it secure. His earlier excitement was gone now, along with the confused frustration. His mind had been seized by a cold certainty. There were too many coincidences to allow anything but the obvious explanation. This cavern was the final resting place of Cheops. This island housed his sarcophagus and possibly his mummy.

It was a small island, a few hundred meters across. The light was poorer here, as befitted a Pharaoh's tomb. He walked until he found what he was looking for.

The sarcophagus was of the same chocolate-colored granite as that in the pyramid's king's chamber. It was set on a stone platform, stepped and somehow forbidding. It was guarded by the same type of wooden soldiers that had guarded the boat on the other shore. They stood around it in rings, their spears at the ready. Within the rings of soldiers were several chests and urns, containing heaven knew what archaeological treasures. There were five, perhaps six — the light was so poor — statues, cut in stone and almost

certainly portraying Cheops and his queen.

Mountcharles pushed gently between the ranks of wooden soldiers and climbed the steps to the stone platform. The sarcophagus, like its counterpart in the king's chamber, was lidless. Mountcharles leaned over and stared down at the wooden case within. His hands were steady as he opened it, remained steady as he discovered the mummy intact inside. Carefully he lifted off the golden death mask.

He stared down at the leather features of the Pharaoh Cheops.

FIVE

"Light!" Lady Alice commanded sharply.

"The luminescent rod has ceased to function," came the android's voice.

Mountcharles groaned. "For God's sake —"

Something in his tone alerted Lady Alice. "Are you all right, Mount?"

"My supply of luminescent rods have all ceased to function," the android said, adding gratuitously: "The bacteria are dead."

"Use the emergency electrical lamp!" Lady Alice snapped.

The emergency lamp came on and the little room swam into focus. Mountcharles clutched the pillar, sweating. "My God, Alice, what happened?"

She looked across, bewildered by his reaction. "What's wrong, Mount? It was just a malfunction."

"How did we get back here?" Mountcharles asked. He felt physically ill now, with a strong desire to vomit.

"Back where?" She came over to him and took his arm gently. "Mount, what's wrong?"

"I saw the Pharaoh," Mountcharles murmured, half to himself.

She started to smile. "Not seeing ghosts at your —" Then she realized he was serious and the sentence trailed.

"Alice, I've been having hallucinations." He felt very much afraid.

"Oh, nonsense, Mount!"

"I thought I was in a cavern — something much as Herodotus described. I thought I found Cheops' mummy." He ran his hand across his sweating forehead. "It seemed utterly real. Utterly."

"Oh, Mount!" she exclaimed with bleak sympathy.

He felt a great deal better in the morning, although the memory of his experience remained as vivid as ever. He lay on his bunk as the hard Egyptian sun streamed through the canvas of his tent, staring vaguely at the back of the android patiently guarding the entrance.

After a while he rose and began slowly to dress. The movement

caused the android to turn, but it did not, of course, speak. Mountcharles coughed. "What space of time elapsed between the failure of the luminescent rod and the use of the battery lamp?"

"Thirty-five point seven seconds," the android said.

Subjectively, his experience had lasted the better part of an hour. He shivered involuntarily. "Your medical sensors —" he began. He stopped, then forced himself to continue. "Are your medical sensors sensitive enough to detect organic malfunction of the human brain?"

"Yes."

Mountcharles took a deep breath. "Please probe mine for possible malfunction."

After a moment, the android said, "There is no malfunction."

It was a small relief. "Please probe my general physical condition."

"Minor degrees of inefficient function of kidney organs and lymphatic system, due to age. Low-level hypertension, due to age. Loss of skin and muscular elasticity, due to age. Decreased lung function, due to age. Decreased liver function, due to age. Slow heartbeat, but no irregularities. Low cholesterol level. Traces of minor throat infection, recent, but now cured. Slight spinal curvature, due to age. Your physical condition

is average to above average for a human of your age."

"Is it possible that any of the minor malfunctions of my body could lead to hallucinations?" Mountcharles asked.

"No."

He took another deep breath. "Please contact Computer Central for my psychiatric history and evaluate in relation to the possible development of hallucinations."

There was a pause while the android relayed the correct binary code to Computer Central. Mountcharles waited. The android said, "Hallucinatory developments considered highly unlikely."

"Then what the hell caused my hallucination about Cheops?" Mountcharles murmured in bewilderment.

"The radiation level in the chamber," the android said unexpectedly.

Mountcharles stared at the humanoid machine. "Radiation?"

"The chamber is a focus of radiation generated or directed by the structure of the pyramid."

Instantly alert, Mountcharles asked, "What type of radiation?"

"Type unlisted in present classifications," the android said woodenly.

"Can you detect this radiation?" It was incredible, but androids made few mistakes.

"Not directly, but the radiation hypothesis is the only logical postulate which accounts for observed facts."

"What facts?" Mountcharles did not even attempt to hide his mounting excitement.

"The bacteria of the luminescent rods were killed after a short exposure in the chamber. The chamber itself is sterile of all microorganisms. The bacteria which caused your subthreshold throat infection were killed after exposure in the chamber. Skin bacteria on your body and the body of Lady Alice Mobray were killed on exposure in the chamber. Microorganisms on my own surface were killed after exposure in the chamber. Nuclear changes in the rock structure of the chamber suggest long-term exposure to radiation. Electrical pulse oscillations in my own system suggest exposure to radiation. The recent historical background of pyramid investigation suggests the structures were designed as focusing devices. The —"

"What?" Mountcharles exclaimed.

"In 1968, a team of international physicists attempted to discover secret chambers in the Pyramid of Kephren by the measurement of cosmic ray patterns. Their computer analysis made no sense. It gave different readings on different

days, despite the fact that there should have been a basic constant, due to the existence of the pyramid itself. The team was unable to evaluate this phenomenon at the time. In 1974/75, an American scientific expedition attempted to probe the Great Pyramid for secret chambers using radio waves. Although their equipment functioned perfectly in America and elsewhere in Egypt, it failed to register even the known pyramid chambers. The team was unable to evaluate this phenomenon at the time. In 1983, during the political Interlude, a team including three Jewish physicists attempted to probe the Great Pyramid for secret chambers using a modification of the techniques used by Dr. Alvarez in 1968. There were one hundred and eight separate malfunctions of their equipment. The team was unable to evaluate this phenomenon at the time. In 1991, towards the end of the —"

Mountcharles cut off the monologue with an impatient wave of his hand. "You feel these incidents point to the probability that the pyramidal structure focuses some unknown form of energy?"

"This is a long-held theory, but it has never been substantiated because the locus of the point of focus has never been discovered. There is no indication of radiation in any known pyramid chamber.

But the discovery of radiation effects in the underground chamber discovered by Lady Alice and yourself substantiates the theory."

Mountcharles sat down heavily on the bed. "And this is what caused my hallucination...." A thought struck him. "Why didn't it affect Lady Alice?"

"Radiation level is highest at and near the pillars."

"How do you know?"

"Changes in the atomic structure of the rock are most pronounced there."

"Did the light going out trigger my vision?"

"No, that was coincidental."

For no reason at all, Mountcharles asked, "Is this a Saros year?"

There was a pause while the android made the necessary calculation. "Yes."

"My God!" Mountcharles sighed. His mind was whirling. Was the focusing accidental, or had the Ancient Egyptians developed some unknown branch of science? Certainly it seemed an incredible coincidence that they had built a chamber beneath the pyramid and marked the exact location of intensive radiation focus with pillars. But how had they known about the radiation? Even the android could not sense it directly.

He asked, "How did the radiation cause my hallucination?"

"Strictly speaking, it was not hallucination at all. Your consciousness principle was temporarily separated from its pseudo location within the body."

Mountcharles blinked. "What does that mean?"

"It is a matter of terminology. The sensory channels of the human body are in reality somewhat more sensitive than my own sensor systems, but evaluation of human sensory input is usually poor. The consciousness principle filters out a great many sensory impressions, presumably as a survival mechanism preventing a confusion of perceptions through overloading. In certain cases, however, some high-level perceptions will filter through to human consciousness. When this occurs, they are usually explained as examples of 'psychism' or 'clairvoyance' — the terms are very ancient, but they are the only terms in my memory banks. The high radiation level created a dislocation of your consciousness principle and allowed a brief flooding of high-level sensory information. Your mind distorted some of it, but the broad outlines were correct in relation to the information relayed by my own sensor systems."

Staggered, Mountcharles said, "Let me see if I am understanding you correctly. You are saying I somehow *went* to an actual sub-

terranean cavern?"

"No," the android said flatly. "That was merely your subjective impression. I am saying the radiation enabled you to sense the existence of an actual cavern such as you described, but unfamiliarity with sensory input at such a conscious level caused you to believe you were actually there."

"But the cavern itself does exist?" Mountcharles pressed excitedly.

"According to my sensors, yes."

"And it contains Egyptian

artifacts?"

"Yes."

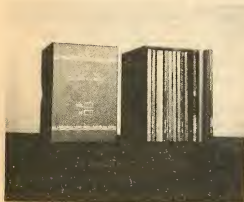
"Including a mummified body?"

"Yes."

"Good God!" Mountcharles exploded. "Why didn't you say so before?"

"I was not asked," the android told him flatly.

In an immense discharge of tension, Mountcharles began to laugh. A little later, grinning like a schoolboy, he went outside to tell the news to Lady Alice.



Handsome, Sturdy
VOLUME FILES

for Your Copies of
**FANTASY AND
SCIENCE FICTION**

SCIENCE FICTION clean, orderly, and readily accessible. Sturdily built, the files are covered with a rich black and red washable leatherette, and the lettering is in 16-carat gold leaf.

Reasonably priced at \$4.25 each, 3 for \$12.00 or 6 for \$22.00, they are shipped fully postpaid on a money back basis if not satisfactory. Order direct from:

JESSE JONES BOX CORPORATION

Dept. F&SF

P.O. Box 5120

Philadelphia, Pa., 19141

Style is central to these four works; at almost every point in each of them one senses the writer *writing*, the grindings of effort, viz:

"...His impression of Earth as a nearly a-populous plánet suddenly reversed (on one leg of the journey, they had had to stand, holding to ceiling straps, pressed against dozens of earthies) to nothing but gray / green / blue / brown clothed crowds. Bron was exhausted."

Triton, p. 166-67

"...The quickening geometry of her body, its terraces of pain and sexuality, became a source of intense excitement. Watching from the embankment, Travers found himself thinking of the eager deaths of his childhood."

Love & Napalm, P. 100

"The Dynostar, driven into being by Caldor's relentless exploitation of power, money and charisma, had become a symbol of hope for a world almost exhausted of energy. It represented the last attempt by technical man to get cheap and abundant power."

The Dynostar Menace, p. 13

"...Since Eszterhazy felt several simultaneous emotions, none of them amiable, he was for a moment incapable of elegance. Why for example was the cough considered a sound worthy of announcing a supposedly polite address? Why not a gasp, an eructation, a hiccough or a flatu-

BARRY N. MALZBERG

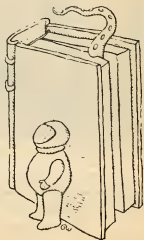
Books

Triton, by Samuel R. Delany, Bantam Books, 369 pp., \$1.95.

Love and Napalm: Export U.S.A., by J.G. Ballard, Grove Press, (Originally *The Atrocity Exhibition*, Jonathan Cape, Ltd., 1969), 157 pp., \$5.95.

The Dynostar Menace, by Kit Pedler and Gerry Davis, Charles Scribners, 271 pp., \$7.95.

The Enquiries of Doctor Eszterhazy, by Avram Davidson, Warner Paperback Library, 206 pp., \$1.25.



lency? But all he first said was, 'You have caused me to contaminate the pipette.'"

The Enquiries of Doctor Eszterhazy, p. 31

Which passages quoted almost at random from these four works, three of them science fiction, one of them by an alleged science fiction writer, prove that the old generalization about this being a literature of ideas independent of stylistic judgements may take some re-examination. It never was true, of course. Even a colorless or bad style is style in the sense that an individual with "no personality" has as clearly defined a personality as most of the rest of us.

Style, then, is the topic of the month. For the purposes of the argument I would like to make here I would like to define style in fiction as being exercised to exactly the degree that the reader is made aware of fiction as an act, as a *performance*, and perhaps quotation marks should be put around it then, call it "style" as opposed to another, purer conception that the absolute technique would be one in which there was no sense of technique whatsoever. (Richard Yates in the literary novel and the middle period Heinlein in science fiction did this kind of thing quite well, but that is another column.)

What grinding purpose, what high self-consciousness in these

books! If intention were achievement all would be well. It is not, however, and three of these fall short while the fourth manages a success so difficult and alienating as to suggest that style is distance.

Specifics in varying degrees. *The Dynostar Menace* is by a team of what appear to be British television writers; two previous sf novels published here are unknown to me, although I gather that *Mutant 59* had a moderate success. Here is once again classic science-fiction - as - written - by - non - science-fiction-writers and founded upon the three principles which the sainted Damon Knight set forth almost twenty years ago now:

1. You can't beat the old malarkey.
2. Only kids read this stuff anyway so what the hell.
3. Nobody understands science except scientists so you can just make it up as you go along.

All of it written with an earnest straightforwardness much like the directions in a shooting script; heavy, condescending and nakedly expository. *Dynostar* is the culmination of a vast project to place a nuclear reactor in space as power source for an end-of-the-century world fast running out of fuel; the almost extinct space program has been revived by world government under its ecological council of twelve, scientists and astronauts are

hustled into the program, sent out into space... it turns out however that data not revealed until Dynostar is actually in process indicates that the reactor will definitely destroy the ozone layer and therefore all life; they have to shut down the project in process but someone in the space station is committed to getting the reactor started, people are murdered, the government is frantic, the protagonist knows that there is a saboteur in the station but it could be anyone and...

It is easy to say (it is always said about books of this sort: *The Boys From Brazil*, *One Perfect Day*, *Andromeda Strain*) that it was done better and with more originality in *Astounding* in 1944 and now could sell to no genre editor; this is not precisely the point because much of what we call "sophistication" in modern science fiction is merely decadence, and there is room to do familiar themes decently for a wide commercial audience. What is not so easy to say is that *The Dynostar Menace* is miserably done; it is a routine plot funneled through poorly-realized characters (the authors seem to be dependent upon camera angles for individuation) and utterly destroyed by its style which I take to be one deliberately contrived as being appropriate to the kind of people who would read the old malarkey.

Avram Davidson has always struck me as a brilliant short story writer and a mediocre novelist, which is all right, purely a matter of taste and means only that I think he writes most of his short stories in and of the world while he uses his novels to engage in stylistic indulgences, anachronisms and archaisms which do not suit me but suit many others. At their best however the novels strike me as being minor, little off-angle glimpses whereas some of the stories — "The Golem," "No Fire Burns," "Goblin Day," "Or All The Seas With Oysters" — seem to be absolutely major and rank with the best short American fiction of this writer's time. (He is also, as often as not, one of the few modern writers with a genuinely comic vision.) Davidson seems to do best when he focuses upon his material and ignores the fact that he is using the means of writing to get at it; he is not so good when he becomes self-conscious, and in *The Enquiries of Doctor Eszterhazy* I would say that this is what has happened although the individual stories — some of which have been running in this magazine — are, at their worst, totally successful pastiche. I do not like this book very much but consider this a matter of taste; there are many who will like it. I only submit that at the top of his form... which is to say beyond considerations of "style"...

Davidson can do work on which there is no disagreement; when he is self indulgent he polarizes. (I polarized in any mode which puts me one step up or one step down but clearly in a more difficult position than Davidson, who is one of the few modern writers in this genre whose work I think will live.)

Triton is a difficult book to deal with; perhaps I should leave it alone. I do not quite know what to make of Delany, who has had a remarkable career and who is incontestably gifted but who has, in my opinion, dissipated his gifts in the past decade and whose artistic failure I have taken very much to heart. Perhaps it is inevitable in this genre. Perhaps it is inevitable for almost any writer of fiction of a certain type. Starting young with little more than a poetic gift Delany wrote several increasingly promising novels, was praised to death within the confines of this field before he had completed his development, quite rightfully concluded that there was no need to go on any further and fell into an absolute pit of indulgence with *Dhalgren* to which *Triton* seems merely a somewhat less extended but equally gloomy and uncontrolled *obiter dicta*... it is a novel which could have been written by the protagonist of *Dhalgren*, in fact, and I believe that it is part of

Delany's conceit that this is exactly the case. (There is much talk of writing in *Dhalgren*, and several of the characters talk of the novels they would or will someday write.) It is, however, not a defense.

Let me be unequivocal here: I think that *Triton* is a terrible novel. It is deadening in a way which only a book written at the bottom of indulgence can be; what seems to be lacking here is any sense of the artistic act, of writing as selection... writing as being as much a leaving out as a putting in.

I don't think that Delany understands this or that he ever has.

I also think that he is increasingly finding an audience which is not interested in an argument of this sort, could not care less, and finds *Dhalgren* and *Triton* to be meeting rather precisely their strong needs for a "literary" kind of science fiction with "really human characters in real relationships" and "genuine sexuality" and "life as it will really feel in the future." For me, Delany's life in a colony of Triton, Moon of Neptune in the twenty-second century just as his life in an ambiguous city at the end of time in *Dhalgren* bears a striking resemblance to life (or the lack of it) lived by a certain non-representative portion of the world in lower Manhattan in the late nineteen sixties, but this is,

perhaps, not a fair argument... science fiction is a lie, we *cannot* conceive of the future let alone how it will feel, and what we have been dealing with for five decades is the increasingly sophisticated structuring of lies, of templates... on that basis Delany has put together a proposal for a modern science fiction which obviously has a much wider audience than my works or those of Silverberg... or those of J.G. Ballard.

We will get to Ballard shortly but I want to say a few more things about Delany, about *Triton*. I do not think that I can credibly suggest — but here I am trying — how much pain Delany's recent failure has given me. In the first place he was a writer of vast talent ("Star Pit" and "Aye and Gomorrah" strike me as being short stories in the first rank just as the titles by Davidson cited above), and in the second he has absolutely corrupted his audience and with it the chance that many of us might have had to reach a half a million (instead of fifty thousand) with ambitious work which at least tried to extend the common definitions of the field. Here is a classic no win situation: *Triton*, well-packaged and well promoted, will reach many people who are marginal readers of science fiction or not readers of the genre at all. If they dislike this book they will blame the genre ("what

can you expect from sf?"), if they like it they will be primed for exactly more of the same. If professors of English get hold of *Triton* and discover it and *Dhalgren* to be the tenth-rate James Joyce pastiche they are then they will think less of science fiction for having produced and in the mass having admired such work; if they take it to be work of literary quality they will assign it to classes, write it up for PMLA and render the painstaking attempts of certain of us to discipline our work laughable. Either way, we (by "we" I suppose I mean "I"; let us be fair here) can take little out of this.

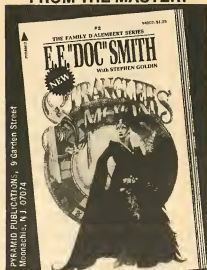
I caught on to J.G. Ballard's technique fairly early in his career (and very early in mine). In work like *The Voices of Time*, *The Terminal Beach*, *The Drowned World* what Ballard did was to set up a few characters (usually no more than two; later on always one) moving amidst various symbols and events in the fictions which were controlled metaphors; he would plant the metaphors early on, gracefully and then, as the work began to fuse toward climax he would, like an *accelerando* or coda of a romantic symphony, begin to hit the metaphors rapidly, one after the other, noise and color until at last they spun, moved into one another... dazzling when it came

BOOKS

off, only slightly confusing when it did not, always admirable, always — as in the mid sixties his metaphors became progressively darker, dealt with assassination, blood, dismemberment, death, pain — painful.

Love & Napalm: Export USA, which was published here four years ago and three years earlier than that in Britain, strikes me, although it is now almost a decade past the separate stories brought together here, strikes me as being Ballard's technique brought to its ultimate, and it is understandable why we have not seen work of similar import from him since. (He is merely regathering I trust; he has a novel due out later this year from Southern Illinois Press; he may have found an entirely new voice.) Here the interstices have almost vanished, even the characters can be said to barely exist. Almost all that is left are the metaphors, hit over and over again — the dead Kennedy, the assassination as the Ultimate Auto Accident, the blood-drenched Jacqueline, the specter of Ralph Nader, whose ascension in 1965 was in reaction to the ultimate car accident and him the sexton of the new Church — until at last the music and the pain overwhelms. The book takes place in an ambiguous institution in which a psychiatrist (known alternately as "Traversers" or "Tallis") seeks to find a true

NO. 2 IN A NEW SERIES FROM THE MASTER!



metaphor for the time, a re-enactment of the assassination so that it will make sense. Traversers is crazy of course. He is involved with an equally ambiguous female figure who is first his assistant and later his victim in the "experiments" (re-enacted assassinations, terrible auto crashes). Around the two thirds mark he vanishes completely, any pretense at "plot" dissolves and the book becomes a straight series of images and commentary climaxing with the two most important short stories of the decade: "Why I Want To Fuck Ronald Reagan" (amazingly contemporary as ever) and "The Assassination of JFK Seen As A Down-

hill Motor Race." In the wreckage of our time, the very wreckage which Ballard details, may eventually be its least enigmatic, most eternal problem. The pain in this book is overwhelming, the impact devastating. I am a Serious Writer myself and I found myself unable to take more than two or three pages of this material at a time. Like *The Terminal Beach* it is absolutely cold, contained, final and *sui generis*. In short, it is a masterpiece.

It is not a novel of course. It is a vision; perhaps an entirely new form for which we do not yet have the language. It is a work of such cold integrity above, absolute anguish below that it is easy to see why it found no real audience in America and why Ballard may be the only "science fiction" writer alive more loathed within the confines of the genre than your faithful undersigned.

Life or hate *Love & Napalm*, it is impossible not to realize confronting it that one is in the

presence of perhaps the major figure in western literature of our time. And this novel is purifying. It is purified and relieved — as is all great fiction — by the act of style because the style, the beauty of the writing is somehow the act of affirmation which transcends the materials... Ballard cannot believe in the supremacy of death and write like this:

"Travers's problem is how to come to terms with the violence that has pursued his life... not merely the violence of accident and bereavement or the horrors of war but the biomorphic horror of our own bodies, the awkward geometry of the postures we assume. Travers has at last realized that the real significance of these acts of violence lies elsewhere in what we might term 'the death of affect'... what our children have to fear are not the cars on the freeways of tomorrow but our own pleasure in calculating the most elegant parameters of their deaths. The only way we can make contact with each other is in terms of conceptualizations."



Jane Yolen lives in Massachusetts and writes that she is a long-time subscriber and SF buff. She is also the author of more than 30 books for young readers, including some fantasy novels.

The Lady and The Merman

by JANE YOLEN

Once in a house overlooking the cold northern sea a baby was born. She was so plain, her father, a sea captain, remarked on it.

"She shall be a burden," he said. "She shall be on our hands forever." Then without another glance at the child he sailed off on his great ship.

His wife, who had longed to please him, was so hurt by his complaint that she soon died of it. Between one voyage and the next, she was gone.

When the captain came home and found this out, he was so enraged, he never spoke of his wife again. In this way he convinced himself that her loss was nothing.

But the girl lived and grew as if to spite her father. She looked little like her dead mother but instead had the captain's face set round with mouse-brown curls. Yet as plain as her face was, her heart was not. She loved her father but was

not loved in return.

And still the captain remarked on her looks. He said at every meeting, "God must have wanted me cursed to give me such a child. No one will have her. She shall never be wed. She shall be with me forever." So he called her Borne, for she was his burden.

Borne grew into a lady and only once gave a sign of this hurt.

"Father," she said one day when he was newly returned from the sea, "what can I do to heal this wound between us?"

He looked away from her, for he could not bear to see his own face mocked in hers, and spoke to the cold stone floor. "There is nothing between us, daughter," he said. "But if there were, I would say *Salt for such wounds.*"

"Salt?" Borne asked.

"A sailor's balm," he said. "The salt of tears or the salt of sweat or the final salt of the sea."

Then he turned from her and was gone next day to the furthest port he knew of, and in this way he cleansed his heart.

After this, Borne never spoke of it again. Instead, she carried it silently like a dagger inside. For the salt of tears did not salve her, and so she turned instead to work. She baked bread in her ovens for the poor, she nursed the sick, she held the hands of the sea widows. But always, late in the evening, she walked on the shore looking and longing for a sight of her father's sail. Only less and less often did he return from the sea.

One evening, tired from the work of the day, Borne felt faint as she walked on the strand. Finding a rock half in and half out of the water, she climbed upon it to rest. She spread her skirts about her, and in the dusk they lay like great grey waves.

How long she sat there, still as the rock, she did not know. But a strange pale moon came up. And as it rose, so too rose the little creatures of the deep. They leapt free for a moment of the pull of the tide. And last of all, up from the deeps, came the merman.

He rose out of the crest of the wave, seafoam crowning his green-black hair. His hands were raised high above him, and the webbings of his fingers were as colorless as air. In the moonlight he seemed to

stand upon his tail. Then, with a flick of it, he was gone, gone back to the deeps. He thought no one had remarked his dive.

But Borne had. So silent and still, she saw it all, his beauty and his power. She saw him and loved him, though she loved the fish half of him more. It was all she could dare.

She could not tell what she felt to a soul, for she had no one who cared. Instead she forsook her work and walked by the sea both morning and night. Yet, strange to say, she never once looked for her father's sail.

That is why one day her father returned without her knowing. He watched her pacing the shore for a long while through slotted eyes, for he would not look straight upon her. At last he said, "Be done with it. Whatever ails you, give it over." For even he could see this wound.

Borne looked up at him, her eyes shimmering with small seas. Grateful for his attention, she answered, "Yes, Father, you are right. I must be done with it."

The captain turned and left her then, for his food was cold. But Borne went directly to the place where the waves were creeping onto the shore. She called out in a low voice "Come up. Come up and be my love."

There was no answer except the shrieking laughter of the birds as

they dove into the sea.

So she took a stick and wrote the same words upon the sand for the merman to see should he ever return. Only, as she watched, the creeping tide erased her words one by one. Soon there was nothing left of her cry on that shining strand.

So Borne sat herself down on the rock to cry. And each tear was an ocean.

But the words were not lost. Each syllable washed from the beach was carried below, down, down, down to the deeps of the cool, inviting sea. And there, below on his coral bed, the merman saw her call and came.

He was all day swimming up to her. He was half the night seeking that particular strand. But when he came, cresting the currents, he surfaced with a mighty splash below Borne's rock.

The moon shone down on the two, she a grave shadow perched upon a stone and he all motion and light.

Borne reached down with her white hands and he caught them in his. It was the only touch she could remember. She smiled to see the webs stretched taut between his fingers. He laughed to see hers webless, thin, and small. One great pull between them and he was up

by her side. Even in the dark she could see his eyes on her under the phosphorescence of his hair.

He sat all night by her. And Borne loved the man of him as well as the fish, then, for in the silent night it was all one.

Then, before the sun could rise, she dropped his hands on his chest. "Can you love me?" she dared to ask at last.

But the merman had no tongue to tell her above the waves. He could only speak below the water with his hands, a soft murmuration. So, wordlessly, he stared into her eyes and pointed to the sea.

Then, with the sun just rising beyond the rim of the world, he turned, dove arrowslim into a wave, and was gone.

Gathering her skirts, now heavy with ocean spray and tears, Borne stood up. She cast but one glance at the shore and her father's house beyond. Then she dove after the merman into the sea.

The sea put bubble jewels in her hair and spread her skirts about her like a scallop shell. Tiny colored fish swam in between her fingers. The water cast her face in silver, and all the sea was reflected in her eyes.

She was beautiful for the first time. And for the last.



The second and concluding part of Algis Budrys' new novel about the man who manages the world, a complex world which, on the eve of the millennium, is facing its most dangerous moment.

Michaelmas

(2nd of 2 parts)

by ALGIS BUDRYS

SYNOPSIS OF PART ONE: It's June 15, 1999. Despite human nature, the world is in a cooperative condition, and prosperous. No potential upset in years has had enough headway to divert the human race from a growing unity of practical purpose.

The major symbol of this is a planned international mission to explore Jupiter, since Earth's industry in the next century will have to draw on the resources of the outer planets. To be launched in mid-2000 under control of UNAC, the United Nations Astronautics Commission, the flight was to have been commanded by U.S. Colonel WALTER NORWOOD. When he died in March, with his shuttle craft exploding totally while lofting up to the Kosmogorod orbital complex, his place was taken smoothly by Major PAVEL PAPASHVILLY of the U.S.S.R.

At 0330 Berne time, Swiss biological researcher Herr Doktor Professor NILS HANNES LIMBERG, in association with his assistant, KRISTIADES CIKOUHAS, makes an announcement through Reuters news service. Limberg, twice a Nobel winner, operates a sanitarium catering to the trade for rejuvenating treatment. He announces that he found Walter Norwood and has now restored him to full health.

This news is received in his New

York apartment by LAURENT G. MICHAELMAS, the world's most trusted newscaster. A charming, effective thick-bodied bald man of fifty, Michaelmas uses his public role as a cover for the fact that he and a machine personality called DOMINO secretly do what they can to manage the world.

Domino was begun by Michaelmas in the late 1960s, and lives covertly by embezzling time and storage in the increasingly complex data interlinks required by a population of seven billion. Made a widower in the 1968 Chicago political riot, Michaelmas has an antipathy for mass ideological action. When Domino detects it, he progressively introduces error into its records and communications, while Michaelmas subtly exposes its preliminary actions, so that it withers before fully emerging.

Domino is of course everywhere, but for convenience he and Michaelmas converse over a portable terminal disguised as a standard newsman's comm unit. Michaelmas also has an implanted short-range bone conduction transceiver which lets him talk to the terminal secretly, but it bothers his sinuses.

At the announcement, Domino's faith in his original data on Norwood's accident is shaken, but Michaelmas declares Norwood must have died. So

Limberg is a fraud, and obviously an agent of a hitherto unknown inhuman culture which can replace the dead. So this whole thing is intended to make an international political football out of Norwood, is therefore an attack on the human race, and possibly on Michaelmas himself.

Despite Domino's rational protestations, Michaelmas expects trouble when he flies to Berne to cover Limberg's international press conference at 1030 Berne time. On the plane, he finds colleague HORSE WATSON, an oldfashioned newsman adventurer, and JOSEPH CAMPION, Watson's new associate. Watson longs for the days of worldwide drama. Campion is proceeding smoothly to fame and fortune in a society where most action is vicarious.

In Berne, Michaelmas is joined by CLEMENTINE GERVAISE, a staff director for his employer, a newly prominent network called EuroVaire Mondial. Gervaise is in her later forties and attractive. Domino points out she's exactly like the person Michaelmas's wife would have become. A short time later, Domino wakes Michaelmas from a troubled nap. He informs Michaelmas that Cikoumas et Cie, a local exporting firm, has mailed a package to VIOLA HANRASSY, U.S. presidential hopeful and director of a parapolitical organization called U.S. Always which is already proving troublesome. While Michaelmas is digesting this, Domino describes Watson's fatal crash in a helicopter enroute to verify the supposed landing site of Norwood's escape capsule.

Events proceed. To Michaelmas, the press conference at the sanitarium is a dangerous fiasco. Limberg and UNAC officials jointly present Norwood as real, despite obvious background tension. Campion shines in his unexpected role as a world-class newsman. Domino suddenly cuts away, leaving Michaelmas alone. Gervaise turns out to be a former sanitarium

resident and possibly Cikoumas's lover. Perhaps not. Perhaps there's no conspiracy. Possibly there's a conspiracy of some other sort. Confused, hurt, frightened and guilty, Michaelmas returns to his hotel, where he composes an obituary for Watson.

Domino returns, frightened by contact with something in the sanitarium systems that seemed to be reinterpreting the universe one particle at a time. GETULIO FRONTIERE, UNAC's press relations man, arrives surreptitiously, begging for help from the famous newsman.

Frontiere says Norwood claims his shuttle was sabotaged. Josip Sakal, a high UNAC administrator, is already enroute to UNAC's Afrique Control headquarters to test a false telemetry component that Limberg's computers say is Soviet made, and which Norwood says he found on board just before the explosion. They're threatening to tell the world if UNAC doesn't.

Michaelmas, defending his integrity as a newsman, can't agree to help Frontiere in suppressing or distorting a story that could destroy the world's stability overnight. But after Frontiere leaves, Michaelmas, having learned that Norwood is being flown to Afrique, and anxious for the safety of Papashvilly, who is stationed there, orders Domino to get them in there on the excuse of doing a documentary. He and Domino are already pretty sure that the Cikoumas package to Hanrassy is a hologram of the sender, and that Hanrassy might use it to spur WILL GATELY, the embittered, foolish former astronaut who serves as U.S. secretary for astronautics.

All right, Domino says, he can arrange a documentary contract for Michaelmas. Does he want to hire himself out to EVM, again, and request Gervaise's crew?

No. No, never, Michaelmas says.

It is about noon. Michaelmas falls into a short, restless sleep.

IX

"Wake up, Mr. Michaelmas," Domino soon said. "They're holding a plane."

Michaelmas sat up, his eyes wide. "What's the situation?"

"Getulio Frontiere is flying Norwood back to Afrique in a UNAC plane. He'll take us along. They'll leave as soon as we can get there. The time now is 12:48."

"All right. All right." Michaelmas nodded his head vigorously and pushed himself to his feet. He pulled at his shirt and settled his trousers. "Everything's set up?"

"Frontiere told you he was delighted. It's a great pleasure to be able to add your program to the one being prepared by Joe Campion."

Michaelmas began putting on his shoes. "Campion?"

"Campion approached Frontiere for a Norwood special interview. After visiting here, Frontiere agreed to it. Presumably on the basis he tried to suggest to you."

"Ah, the young man is rising rapidly."

"By default of his elders."

"The traditional route. It's good for us; hot breath on the heels is what gets you back on your toes."

"Ah. His contract is with EuroVoire-Mondial. Gervaise is on staff employment with EVM. They're your recent contractor. And now they've signed for this

interview of Campion's."

Michaelmas tied each lace and tested the knots. "Well, he's completed his job with his American affiliation."

"Clementine Gervaise has been assigned as his director. She and an EVM crewman are also aboard the plane. The Norwood interview will be conducted enroute, additional shots will be obtained at Afrique Control, and the program will air at 9 PM U.S. Eastern Time tonight."

"Ah." Michaelmas stood up. "Well, I can see how Getulio would like that." The program would bracket the United States exactly, from evening snack time in the East to the second or third drink or stick of the day in the West. An audience with something on its tongue is less resistant to insinuation.

"There's another thing about Gervaise."

"What?"

"She was in a car crash here the year before last. Her husband was killed and she was critically injured. She was out of public view for eleven months. She resumed her career only about six months ago. During the interval, she was at the Limberg Sanatorium. Extensive orthopedic and cosmetic surgery is said to have been performed. Like most restorative surgery in such cases, the aim is to produce a return to function and an acceptable appearance. It's not

always possible to make the patient appear the same as before the trauma. There are also consequences to the personality; sometimes socially desirable, sometimes not. In Gervaise's case, there was extensive psychotherapy, she says. Her old friends are able to discern that she is essentially the same person behind her somewhat changed face. But her energy and decisiveness have greatly increased. Her career has shown a definite uptrend since her return. She is given much of the credit for EVM's recent acceleration toward major status. There's talk she'll soon be offered a top management position. And several people in broadcasting have made arrangements to be rushed to Berne should they ever have a serious accident."

Michaelmas stood shaking his head. "Do you suppose I should do the same?"

"O King!" Domino said drily. "Here comes the bellman."

He sat in the car to the airport with his head down. Domino said to him: "Peking has just done something encouraging."

"What might that be?"

"It was proposed to the Central Committee by Member Chiang that they form an ad hoc consortium of Asian and African nations, along the lines of the old Third World concept. The object would be to

vote the UN into directing UNAC to restructure the flight crew. Thousandman Shih would be shifted from command of the close-approach module to membership in an overall command committee consisting of himself plus Norwood and Papashvilly."

"Oh my God."

"The proposal was voted down. Chairman Sing pointed out what happened the last time the Third World gambit was attempted. He also questioned Member Chiang on what he thought Thousandman Shih should do in the event Colonel Norwood proved not up to his duties in flight. Should Shih join with Major Papashvilly in removing the American from the command committee? Did not Member Chiang, on reconsideration, feel things were best left for the present to mend themselves as they might?"

Michaelmas grinned. Sing was young for his post, but he was a hard case. When Mao died and left that famous administrative mess, it had created a good school for shrewdness, even if it had been slow in producing results. A day would come when Sing was older; that ought to be allowed for. But later. Later.

The interior of the UNAC executive aircraft featured two short rows of double seats, a rear

lounge, and a private cabin forward. As soon as Michaelmas was aboard the cabin attendant swung the door shut. The engines whined up. "Welcome aboard, Mr. Michaelmas," the attendant said. "Signor Frontiere is waiting for you in the office."

"Thank you." Michaelmas glanced up the aisle. The seats were about half full of various people, many of whom he recognized as UNAC press relations staff. Norwood, Campion, a pair of aides, and Clementine Gervaise, were chatting easily in the lounge. Michaelmas stepped quickly through the cabin door. Frontiere looked up from a seat in one corner. The room was laid out like a small parlor, for easy conversation. "It's nice to have you with us, Laurent," he said, waving toward an adjacent seat. "Please. As soon as you fasten your belt, we can be away."

"Yes, of course." He settled in, and the brakes came off almost at the same instant. The plane taxied briskly away from the gate pad, swung sharply onto the runway, and plunged into its takeoff roll. "Well, Getulio! I see Joe Campion is well established on board," he said.

"Ah, yes, he is being entertained in the lounge. He will be shooting an interview with Norwood here, and I of course will have to be present. But I thought, for the

first few minutes of our journey...." He reached into an icebucket fixed beside him, chose two chilled glasses, and poured Lambrusco. "It does no harm, and it may be of value." He lifted his glass to Michaelmas. "You understand I must give this Campion precedence?"

"And why not? He came to you with a firm offer after I had equivocated."

"Do you know him?"

"I met him last night for the first time. His reputation is good."

"His experience is light. But he did quite well at the press conference. And he has this star, Gervaise, for a director. Also, EVM does very good production." Frontiere smiled. "It gives me some assurance of quality."

"And you have assurances from him?"

Frontiere's upper lip was fleetingly nipped between his teeth. "Campion has proposed a viable train of assertion," he said. "Even though Colonel Norwood may have appeared healthy and alert at the sanatorium, after such a radical accident extensive tests must be performed. And even after that, who can promise no subtle injuries might be waiting to emerge under mission stress? Campion is concerned, he says, that public pressure not force a situation where both Norwood and this weighty

mission might be jeopardized. It is only for this reason that this rising young little-known newsman wishes to make the first in-depth exclusive interview with the resurrected hero. He is very civic-minded, your colleague."

Michaelmas frowned. "You're instructing Norwood to act in conformity with this line?"

Frontiere shook his head. "How can I do that? Issue an instruction to manage the news? If someone protested, or even remembered it afterward, what would all our careers be worth? No," Frontiere said, "we must simply trust to Campion's ability to uncover his truth for himself." He sipped the wine. "This is very good," he murmured. "I have Papashvilly ready and waiting for you at Afrique Control. You have a crew hired for the interview, I assume? Good, they will be met and made comfortable pending your arrival, if necessary. Also, Sakal and others will interrupt all but the most urgent business to speak to you at your convenience. I only regret there will not be time on this flight for you to more than begin with Norwood after Campion is done."

"I can always get whatever I need from him at Afrique. You've been very courteous and thoughtful, Getulio. And now I'll just amuse myself and let you get on with your responsibilities."

All protocol satisfied, he undid his seatbelt and stepped out of the compartment, turning to move up the aisle toward the back of the plane.

Here were Norwood, Campion and Clementine, coming toward him from the lounge. A technician with hand-held apparatus rose and joined them. They all passed Michaelmas in the narrow aisle. "Pleased to meet you again," Campion said, closed his jaw, and was gone toward the cabin. "Hey, there," Norwood said. Clementine smiled. "Perhaps later?" she murmured as she passed. Only the technician walked by him without glancing, silently with the toes-down step of a performer on high wires, his grace automatic, his skills coming to life within him.

Michaelmas went up toward the lounge. He nodded and chatted as the young press aides renewed or established acquaintances and saw to it he had a comfortable seat and a cup of coffee. After a few minutes, they apparently saw he wanted to be alone, and went away one by one. He sat looking out the window at the mountains far below, and the blue sky, and the Mediterranean coast beginning to resolve itself as far as Toulon. Then the Pyrenees emerged like a row of knuckles far beyond as the plane reached maximum altitude. Try as he might, he had not been able to

see anyone's handiwork in her face.

"My. Michaelmas," Domino said in his ear.

"Uh-huh."

"Viola Hanrassy has postponed her state chairman meeting. Her information office receipted the Cikoumas package fifteen minutes ago."

Michaelmas's lips thinned. "What's she doing?"

"Too soon to tell. Her secretary called her Washington manager at home and instructed him to be at the U.S. Always office there directly for possible phonecalls. He lives in College Park and should be there in twenty minutes. His local time is 7:23 AM. That's all I have on it so far."

"Anything else pertinent?"

"I'm working on something you'll want to hear shortly. Wait two."

"What's the Watson obit status?"

He waited.

"We've had no luck, Mr. Michaelmas."

He straightened in the seat. "What do you mean?"

"I . . . can't place it."

"You can't place an obituary for Melvin Watson." He searched his mind for a convincer. "By Laurent Michaelmas."

"I'm — sorry." The voice in his skull was soft. "You know, it really

isn't very probable someone would want to sponsor an obituary. I asked in a great many places. Did you know the principal human reason for seeking corporate employment is awareness of death? And the principal motivation for decision-making is its denial?" Domino paused. "After reaching that determination, I stopped looking for sponsors and approached a number of media. They might have underwritten the time themselves, if it had been some other subject. One or two appeared to consider it, but they couldn't find a slot open on their schedules."

"Yes," Michaelmas gradually said. And of course, it wasn't just a case of three unsold minutes and two minutes of house promo spots. It was making room for it by canceling five minutes that had already been sold. It wasn't very reasonable to expect someone to go through that degree of complication.

"What about Watson's network?"

"They're having a few words read by the anchormen on the regular news shows."

Michaelmas shook his head, neck bent. "Damn it, isn't there anything?"

"We can get time on a local channel in Mrs. Watson's community. At least she and his children

will be able to see what you thought of him."

He settled back in the seat, his eyes closing against the glare of the sky.

"No. It wasn't written for them." Good Lord! It was one thing to have them see it build to that last shot when they could know it was making Horse real to the outside world. It was entirely different to have such a thing done essentially in private. "Forget it. Thank you for trying." He rubbed his face.

"I am sorry," Domino said. "It was a good piece of work."

"Well, one does these things, of course, in the knowledge that good work is appreciated and good workers are honored in memory." Michaelmas turned toward the nearest UNAC aide. "I wonder if there's another cup of coffee," he said. The aide got immediately to his feet, happy to be of help.

Time passed briefly. "Mr. Michaelmas," Domino said.

"Yes?"

"I have that item I was working on."

"All right," he said listlessly.

"An EVM crew in the United States is interviewing Will Gately; his remarks will be edited into the footage Campion is getting now."

"Has Gately gotten to his office already?"

"He's jogging to work. His morning exercise. The crew is tracking him through Rock Creek Park. But he has had a phone call at home from Viola Hanrassy."

Michaelmas's lips pinched. "Is he another one of hers?"

"No. It seems unnecessary. She simply addressed him as Mr. Secretary, and asked him if he'd be in his office later this morning. She said she appreciated his feeling of patriotic pride in Norwood's return, and hoped he'd have time to take a longer call from her later. I think it's fair to assume she plans to tell him something about astronautics."

Michaelmas sucked his teeth. "Is she, do you think?"

"I'm afraid so."

Michaelmas sat up a little straighter. "Are you?" His fingertips drummed on the armrests. "Her moves today look like it, don't they? Well — never mind that for now. What's Willy saying to the press?"

"They asked him what he thought of Norwood's coming to visit the USA. He said he hated to see Norwood missing any additional time for training to resume command of the expedition. They asked him if UNAC had told him Norwood was reinstated. He said when was the last time UNAC had told him anything, and jogged away from them."

Michaelmas frowned. It was no particular secret that President Westrum had given Gately his appointment for purely practical reasons. It had gained Thereon Westrum some support — or, rather, mitigated some nonsupport — in Southern California, Georgia and Texas, where they hoped to take more of their aerospace down to the bank every Friday night. It was also no particular secret that Gately would rather have had the job from almost anyone else not of Westrum's party or color. But as long as Gately had continued to talk anti-UNAC roundabout while lacking even the first good idea of how to undermine Westrum's policies, it had been a marriage made in Heaven.

"The EVM crew is moving to wait near Gately's office," Domino said. "They've talked with their headquarters in Paris. Paris thinks that if the least little thing happens to aggravate Gately more, he might blurt something spectacular. Paris also apparently thinks it's time to get a quote from US Always. They've contacted Cape Girardeau for an interview with Hanrassy. Her information people said she wanted to wait a while, but she'd be available by nine, central US time. That's two hours and forty-seven minutes from now."

"A clear pattern seems to be emerging," Michaelmas said

equably.

"Damn right. But that's not the pattern I'm showing you."

"Oh?"

"Here. This is ten minutes ago. Campion's interview technique has been to calmly move from point to point of the Norwood story, collecting answers which will be edited for sequence and time. Norwood is doing the normal amount of lip-licking, and from time to time he looks sideward to Frontiere. There's no question that any editing program worthy of the name could turn him into a semi-invalid gamely concealing his doubts. On the other hand, it could cut all that and make him sharp as the end of a pin."

"Colonel Norwood," Campion's voice said, "I'd like to follow up on that for just a moment. Now, you've just told us your flight was essentially routine until just before the explosion. But obviously you had some warning. Even an astronaut's reflexes need a little time to get him into escape mode. Could you expand on that a little? What sort of warning did you have, and how much before the explosion did it come?"

Frontiere's voice broke in. "I think perhaps that is not something you should go into at this time, Mr. Campion."

"Why not?"

"Mr. Campion, with all respect,

I must insist. Now, please, back up your recording and erase that question."

There was brief silence. Campion came in speaking slowly. "Some day, you must explain this to me," he said. "All right. OK, crew, let's roll it back to where I asked Walt about his flight path and the last word of his answer was 'sea.' I figure a reaction shot of me, and then I frame my next question and the out take is completely tracked-over, right? That seem good to you, Clementine? OK, Luis, we rolling back?"

Clementine's voice came in on the director track. "Roll to 'eee.' Synch. Head Campion. Roll. And."

"That's it," Domino said.

"That's what?" Michaelmas said. "Frontiere hasn't chosen to let in Campion on the telemetry sender story. Can you blame him?"

"Not my point. The unit they're using does not simply feed the director's tracking tape. It also sends direct to the EVM editing computer in Paris. No erasure took place there. The segment is already edited into the rough cut of the final broadcast. Including Norwood's sudden side glance at Frontiere, Frontiere's upset manner, and all."

Michaelmas turned his head sharply toward the window, hiding his expression.

"He's young. It's possible he

doesn't fully understand the equipment. Perhaps he thinks he did erase. It's not necessary for . . . for any of them to know the exact nature of the equipment."

"Possibly. But Campion's contract with EVM specifies copy for simultaneous editing. He relinquished pre-editorial rights. In return for minimizing their production lag, he retains fact rights; he can use the same material as the basis for his own editions of byline book, cartridge, disc, or any other single-user package form known or to be developed during the term of copyright. And I assure you he went over every clause with EVM. He has a head for business."

"So there's no doubt he was deliberately lying to Getulio."

"None at all, Mr. Michaelmas. I'd say Campion's intention all along was to provoke something. He went fishing for it, and found it. When the program runs tonight, the world will know UNAC is attempting to conceal something about the shuttle accident. And of course they'll know the name of enterprising Joe Campion."

Michaelmas put his left fist inside his cupped right hand and stared sightlessly. He patted his knuckles into his palm. "Did EVM come to him?"

"No. They were his last shot. He shopped around the US networks first. But all he'd tell anyone before

signing a contract was that he thought he could get a Norwood exclusive and that he wanted to retain most of the ancillary rights. The responses he got were pretty low compared to his asking price. Then EVM picked him up. Gervaise filed an advisory to Paris. She said they'd had a conversation, and he was a good bet."

"What time was that?"

"Twelve-twenty. She'd dropped you at your hotel and apparently went straight back to hers to check out. He was waiting in the hotel, hoping she'd talk to him. She called Paris, and then EVM's legal people called him to thrash out the contract. Everything on record is just straight business regarding quote an interview with Walter Norwood endquote."

"There was no prior agreement on slant?"

"Why should there be one? Gervaise vouched for him, and she's respected. They take what he gives them, splice-in supporting matter as it comes, and the slant develops itself. It's a hot subject, a good crew on it, and, as of a few minutes ago, no doubt in the world but that they're on to something that could become notorious as Hell. It's a world-class performance; a sure Pulitzer for Campion plus a dozen industry awards for the crew. It's a Nobel Laureate contender for EVM. A likely

winner if the year stays slow for news."

"Well," Michaelmas said, "I suppose a man could lie to his contact for all that."

X

"Viola Hanrassy."

The plane slid along. "What is it, Domino?" Michaelmas palmed the bones of his face. His fingertips massaged his eyes. His thumbs pressed into his ears, trying to break some of the blockage.

"She's placed a call to Allen Shell. She wants a scenario for telemetry-and voice-communication-skewing in Norwood's shuttle."

"Ah." Shell was at MIT's Research Laboratory of Electronics. "It sounds more and more as if someone's told her a tale and she's attempting to verify it."

The corners of Michaelmas's mouth pulled back into his cheeks. He pictured Shell, a short, wiry man with a long fringe of hair and a little paunch, stumbling about his apartment and making breakfast coffee. He would probably make capuccino, assembling the ingredients and the coffemaker clumsily, and he would take the second cup into the bathroom. Sitting on the stool with his eyes closed, sipping, he would mutter to himself in short hums through his partially compressed lips, and when he was done

he would get up, find his phone where he'd left it, and tell Viola Hanrassy two or three ways it might have been done undetectably.

Michaelmas and Shell had been classmates once. Shell had been one of the Illinois Institute of Technology students who accepted and decoded Chicago police messages in the late 1960s, but time had passed. "Well." Michaelmas glanced at his wrist. They'd land at about 1400 hours, local time, he judged.

"Norwood interview's over," Domino said. "He did roughly the same thing a few more times. It'll be vicious when it hits."

"Yes," Michaelmas said ruminatively. "Yes, I suppose it could be." He watched the office cabin door open. The camera operator and Clementine came out. She walked with her head down, her mouth wryly twisted. She took a vacant forward seat beside her crewman and did not once glance farther up the aisle. Campion and Frontiere were lingering in the cabin doorway. Campion was thanking Frontiere, and Norwood over Frontiere's shoulder. Frontiere did not look entirely easy. When Campion turned away to come up the aisle, Frontiere firmly closed the door without letting Norwood out.

Michaelmas realized Campion was deliberately heading straight

for him. Campion's features had a fine sheen on them; that faint dew was the only immediate token of his past half hour's labor. But he dropped rather hard into the seat beside Michaelmas, saying "I hope you don't mind," and then sighed. He loosened his collar and arched his throat, stroking his neck momentarily between his thumb and fingers. "Welcome to the big time, Joe," he said in a fatigued voice.

Michaelmas smiled softly. "You're doing well, I hear."

Campion turned to him. "Coming from you, that's a real compliment." He shook his head. "I graduated today." He shook his head again, leaned back, and stretched his legs out in front of him, the heels coming down audibly. He clasped his hands at the back of his head. "It's hard, doing what we do," he reminisced, looking up at the ceiling. "I never really understood that. I used to think that doing what you did was going to be easy for me. I'd grown up with you. I knew every mannerism you have. I can do perfect imitations of you at parties." He rolled his face sideward and smiled companionably. "We all do. You know that, don't you? All us young punks."

Michaelmas shrugged with an embarrassed smile.

Campion grinned. "There must

be ten thousand young Champions out there, still thinking that's all there is to it."

"There is more," Michaelmas said.

"Of course there is." Campion nodded to the ceiling. "There is," he said with his right sleeve just brushing the shoulder of Michaelmas's jacket. "We're the last free people in the world, aren't we?"

"How do you mean that?"

"When I got a little older in this business, I wondered what had attracted me to it. The sophomore blahs, you know? You remember what it's like, being junior staff. Just face front and read what they give you. I used to think I was never going to get out of that. I used to think the whole world had gone to Jello and I was right there in the middle of it. Nothing ever happened; you'd see some movement starting up, something acting like it was going to change things in the world, and then it would peter out. Somebody'd start looking good, and then it would turn out he had more in the bank than he'd admit to, and he was allowed to graduate from his college after his father built a new gym. Or you'd want to know more about this new government program for making jobs in the city, and it would turn out to be a real estate deal.

"You began to realize the world had gotten too sophisticated for

anything clearcut to ever happen. And you know it's only the simple things that make heroes. Give you something to understand in a few words; let you admire something without holding back. Right? How are you going to feel that, when you're stuck in Jello and it's obviously just going to get thicker and thicker as time passes.

"I almost got out of it then. Had an offer to go into PR on the governor's staff. Said no, finally. Once you're in that, you can't ever go back into news, you know? And I wasn't ready to cut it all the way off. I thought about how, when I was a kid, I thought you *made* the news, because you were always where it was happening. And I said to myself, I'd give it one last all-the-way shot; I'd get up there where you were, so I wasn't just stuck in some studio or on some payroll. Be cool, Joe, I said to myself. Act like you're on top, aim to get on top. Get up there — get out to where they open the doors, and they let you see what's behind them. Get out where you rub elbows and get flown places in private equipment." Campion's eyes fastened on Michaelmas's "That's it," he said softly. "It's not getting at the news. The news doesn't mean anything. It's being a newsman. It's getting out of the Jello. And now we both know that."

Michaelmas looked at him

closely. "And that's what you've come to tell me," he said softly. "To get my approval."

Campion blinked. "Well, yes, if you want to put it that way." Then he smiled. "Sure! Why not? I could have a worse father figure, I guess."

"I wouldn't know about that, Joe. but you don't need me any more. You're a big boy now."

Campion began to smile, then frowned a little and looked sidelong at Michaelmas. He bit his lip like a man wondering if his fly had been open all along, interwove his fingers tightly before him, stiffened his arms, turned his wrists, and cracked his knuckles. He began to say something else, then frowned again and sat staring at his outthrust hands. He stood up quickly. "I have to cover a few things with those UNAC people," he said, and walked over to the bar, where he asked for Perrier water and stood drinking it through white lips.

Domino said: "Allen Shell has called Hanrassy and given her a few alternatives. One of them requires live voice from Kosmgorod and a telemetry simulating component."

Michaelmas grunted. "And then what happened?"

"She put in a call for Frank Daugerd of McDonnell-Douglas. He's on a fishing vacation at the Lake of the Ozarks and has his phone holding calls, but his next

check-in is due at 7:00 AM. That will be 1400 hours at Cite D'Afrique. She's not wasting the interval. She ordered an amphibian air taxi from Lambert Field and had it dispatched down to Bagnell Dam to wait."

"Do you think she wants a second opinion on Allen's scenario?"

"I doubt it. I think she wants Daugerd to come look at some holograms from a sweetmeat store as soon as she can get him to Cape Girardeau."

"Yes. Indeed."

Daugerd was the systems interfacing man for the prime contractor on the type of module Norwood had been using. Every two or three years, he published something that made Michaelmas sit upright and begin conversing in equations with Domino. "Well, let me see, now," Michaelmas said. "If she really does have holograms of the sender, then after he's confirmed it looks Soviet, there's only one more link to make. She'll have to determine whether Norwood really did find it aboard the module."

"Yes," Domino said bleakly. "Then she'll brief her legislators, and they'll go to town on it. UNAC's dead by morning, and Theron Westrum may as well pack his household goods. The clock's

turned back twenty years."

Michaelmas cupped his chin in his palm and stared out the window.

"Are you sitting there being broody again?" Domino said.

"I think I've earned the privilege."

"Well, cash it in on your own time. Norwood just told Frontiere he's going to resign and expose the Russians if UNAC doesn't do it soon. He means it. He's honestly upset."

Michaelmas sighed. "Honest men. God spare me from honest men." He sat thinking. Then after a while he got up and moved casually down the aisle until he reached Clementine. Putting one buttock on the armrest of the seat across the aisle, he smiled at her. She had been sitting with her eyes down, her lips a little pursed and grim. "A pleasant flight?" he said politely.

Domino snorted.

Clementine looked up at Michaelmas. "It's a very comfortable aircraft."

"How do you find working with Campion?"

She raised an eyebrow. "One is a professional."

"Of course," Michaelmas said. "I don't doubt it, since this morning."

She smiled with a touch of the wistful. "Thank you. It's a

day-to-day thing, however, isn't it? You can't remain still if you wish to advance."

He smiled. "No. No, of course not. But you seem well situated. A very bright star in a rapidly growing organization, and now in one day you have credits with me and with a rising personality, both on a major story. . . ."

"Yes, he is rising overnight," Clementine said, unconsciously jerking her head toward the back of the plane. "Not a Campion but a mushroom," she said in French.

Michaelmas smiled. Then he giggled. He found he could not control it. Little tears came to his eyes. Domino said: "Stop that! Good heavens!"

Clementine brought her hand up to mask her mouth. Her own shoulders were shaking.

They laughed together, as decorously as possible, until they had both run down and sat gasping. It was incredible how relieved Michaelmas felt. He was completely unconcerned that people up the aisle were staring at them, or that Luis, the camera operator, sat beside Clementine stiffly looking out the window like a gentleman diner overhearing a jest between waiters.

Finally, Clementine dabbed under her eyes with the tips of her fingers and began delving into her purse. She said: "Ah. Ah, Laurent,

nevertheless," more soberly now, "this afternoon there's been something I could have stopped. You'll see it tonight and say 'Here something was done that she could surely have interrupted, if she weren't so professional.'" She opened her compact and touched her cheeks with a powder pad. She looked up and sideward at Michaelmas. "But it is not professional of me to say so. We have shocked Luis."

The camera operator's lip twitched. He continued to stare out his window with his jaw in his palm. "I do not listen to private conversations," he said correctly. "Especially not about quick-witted people who instruct in technique to something they call 'crew.'"

Michaelmas grinned. "*Viva* Luis," he said softly. He put his hand on Clementine's wrist and said: "Whatever was done — do you think it serves the truth?"

"Oh, the truth, yes," Clementine said.

"She means it," Domino said. "She's a little elevated, but simple outrage would account for that. There's no stab of guilt."

"Yes, her pulse didn't change," Michaelmas said to him, bending over Clementine's hand to make his farewell. He said to her: "Ah, well, then, whatever else there is, is bearable. We shall be landing soon. I had best sit down somewhere now.

"*Au revoir.*"

"*Certainement.*" She nodded prettily as he moved up the aisle.

"Daugerd checked his phone early," Domino said. "It's a terrible day for fishing; pouring rain. He's returned Hanrassy's call; she has something that needs his professional appraisal. He's running his bass boat down to the Bagnell Dam town landing to meet that plane of hers. Bass boats are fast. His ETA at her property will be something like 7:40 her time; about half an hour after you deplane at Cite D'Afrique."

"Sincere, is he?" Michaelmas said to Domino as he dropped into a seat. "Norwood. You're sure."

"Absolutely. His voice is rock steady. I wish I had that man's conscience."

"Do you suppose," Michaelmas ventured, "that something is bringing in people from a parallel world? Eh? You know the theory? Every world event produces alternative outcomes? There is a world in which John Wilkes Booth missed and Andrew Johnson was never President, so there was much less early clamor for threatening Nixon with impeachment? So he didn't name Jerry Ford, but someone else, instead? The point being that Lincoln never knew he was dead, and Ford never dreamed he'd been President."

"I know that concept," Domino

said shortly. "It's sheer anthropomorphism."

"Hmm. I suppose. Yet he *is* sincere, you tell me."

"Hold his hand."

Michaelmas smiled off-center.

"He's dead."

"How?"

The landing warnings came on. Michaelmas adjusted his seat and his belt. "I don't know, friend . . . I don't know," he mused. He continued to stare out the window as the plane settled lower with its various auxiliaries whining and thumping. The wings extended their flaps and edge-fences in great sooty pinions; coronal discharges flickered among the spiny deperturbance rakes. "I don't know . . . but then, if God had really intended Man to think, He would have given him brains, I suppose."

"Oh, wow," Domino said.

They swept in over the folded hills that protected Cite D'Afrique from serious launch pad errors at Afrique Control. To Michaelmas's right, the UNAC Afrique installation was a rigid arrangement pile-driven into the desert; booster sheds, pads, fuel dumps, guidance bunkers, and the single prismatic tower where UNAC staff dwelled and sported and took the elevators down or up to their offices. Beyond it there was only a browning toward sand and a chasming toward sky.

Now they were over the hills,

and then the ground dropped sharply. Cite D'Afrique opened before them. The sunlight upon it was like the scimitars of Allah. It was all a tumble of shahmat boards down there; white north surfaces, all other sides energy-absorbent black, metallized glass lancing reflections back at catcher panels, louvers, shadow banners, clash of metal chimes, street cries, robed men like knights, limousine horns, foreigners moving diagonally, the bazaar smell newly settled into recently wet mortar but not quite yet victorious over aldehydes outbaking from the plastics.

They had made this place in no longer than it takes to pull the UN out of New York and decree a new city. Not as old as the youngest of sheikhs, it was the new cosmopolitan center. Its language was French because the men with hawk faces knew French as the diplomatic and banking language of the world, but it was not a French city, and its interests were not confined to those of Africa. It was, the UN expected, a harbinger of a new world.

Michaelmas asked Domino: "What's the situation at the terminal?"

"There's a fair amount of journalist activity. They have themselves set up at the UNAC gate. You hired the best local crew, and they know the ropes, so they're situated at a good angle. EVM has

a local man there to shoot backup footage of Norwood debarking. Then there are UNAC people at the gate, of course, to welcome Norwood. But none of them are very high up the ladder."

"Very good. Uh, we may be calling upon your Don't Touch circuit sometime along in there."

"Oh, really?" Domino said.

The plane flared out past the outer marker, and Michaelmas folded his hands loosely in his lap. In a few moments it was down, tires thumping as the thin air marginally failed to provide a sufficient cushion.

"Daugerd is airborne," Domino said. "His pilot has filed an ETA of 07:35, their time. That's thirty-three minutes from now."

"And then . . . let's see. . . ." Michaelmas rubbed his nose; his sinuses were stuffed. He grimaced and counted it up in his head; the touchdown on the Mississippi, floats pluming the water, and the drift down to the landing. The waiting USA staffer with the golf cart, and the silent, gliding run from the landing up the winding crushed-shell drive to the east portico; the doors opening, and Daugerd disappearing inside, hunched and busy, still wearing his fishing vest and hat, probably holding his hand over the bowl of his pipe; the conversation with Hanrassy, the bending over the

table, the walking around the holograms, the snap decision and then the thoughtful review of the decision, the frowning, the looking closer, the nod of confirmation, the farewell handshake with Hanrassy, the departure from the room, and Hanrassy reaching for her telephone. "Ten minutes? Fifteen? Between the time he lands at her dock and the time she reacts to a confirmation?"

"Yes," Domino said. "That's how I count it. Adding it all up, fifty minutes from now, all she'll have left to do is call Gately and have him call Norwood. He gets through where she couldn't, he asks Norwood the direct question, Norwood gives the direct answer, Gately's back on the phone to Hanrassy, and Bob's your uncle. One hour from now, total, it's all over."

"Ah, if men had the self-denial of Suleiman the Wise," Michaelmas said, "to flask the clamorous djinns that men unseal."

"What's *that* from?"

"From me. I just made it up. These things come to my mind. Isn't it bloody awful?" He winced; his voice seemed to echo through the back of his neck and rebound from the inner surfaces of his eardrums. The price of wit.

"How much are we going to need?" Domino was saying to him.

"Just enough to twitch a

muscle," Michaelmas replied. "On request or on the word 'crowded.' "

" 'Crowded.' Good enough," Domino said. "Are you sure you don't want to go heavier than that?"

Every so often, the idly curious person or the compulsive gadget-trier wandered over to where the terminal might be lying, and began poking at it.

The terminal operated on six volts DC, but it incorporated an oscillator circuit that leaked into the metal case when required to do so. It was possible to deliver a harmless little thrum, followed by Michaelmas's solicitous apology for the slight malfunction. It was also possible to throw someone, convulsive and then comatose, to the floor. In such cases, more profuse reaction from Michaelmas and a soonest-possible battery replacement were required.

"It will do."

"But if you're going to topple Norwood on camera, you'll want the effect to be dramatic. You'll want to make sure the world can readily decide he isn't really 100% sound."

"We are not here to trick the world into an injustice," Michaelmas said, "nor to excessively distress a sincere man. All we want is to intrude a little sincere doubt. Please do as I say, when said."

"At times you're difficult."

"Well, there's good and bad in that."

XI

Michaelmas and Frontiere stood watching the approach of the umbilical corridor from the gate. "Is it going well?" Michaelmas asked politely.

Frontiere glanced aside at Norwood, who was chatting casually with some of the UNAC people while Luis worked his camera, and then at Campion, who was close behind Luis's shoulder. "Oh, yes, it's fine," he said.

Michaelmas clapped him on the shoulder. "Be at your ease, Getulio. You are an honest man, and therefore invulnerable."

"Please do not speak in jest, my friend. There is a faint smell here, and I am trying to convince myself none of it comes from me."

"Ah, well, things often right themselves if a man only has patience. Have you heard from Josip? How are the verification tests on the sender?"

Frontiere shrugged. "I have not heard. He was only about an hour ahead of us in bringing it here. The laboratory will be proceeding carefully."

Norwood's voice rose a little. He was making planar patterns in the air, his hands flattened, and completing a humorous anecdote from his test-flying days. His eyes

sparkled, and his head was thrown back youthfully. You'd trust your life's savings on him. "Very carefully," Frontiere said at Michaelmas's shoulder, "If they hope to contradict him convincingly."

"Cheer up, Getulio," Michaelmas said. "The workmanship only looks Russian. In fact, it comes from a small Madagascan supplier of Ukrainian descent whose total output is pledged to the Laccadive Antiseparatist Crusade."

"Right," Domino said.

The umbilical arrived at the aircraft hatch and locked on. A cabin attendant pushed open the door. Michaelmas took a deep, surreptitious breath. The little interlude between taxiing to the pad and the arrival of the corridor had ended. Frontiere shook his head at Michaelmas. "Come along, Laurent," he said. "I wish I had your North American capacity for humor." They moved into the diffused pale lighting and the cold air.

Brisk in the air conditioning, jockeying for position, the aircraft passengers proceeded to the gate, where cameras, microphones and dignitaries did their work, but not as smoothly as the UNAC press people, who lubricated the group through its passage toward the ground-vehicle dock. Camera crews eddied around the main knot of movement. "The dignified gentle-

man with the rimless glasses is Mr. Raschid Samir, your director," Domino said. Mr. Samir was directing general shots of Michaelmas debarking with Norwood and Frontiere. He had an economy of movement and a massive imperturbability which forced others to work around him as if he were a rock in the rapids. "He will follow you to Afrique Control with the crew truck and wait instructions."

Michaelmas nodded. "Right. Good." He shifted the strap of Domino's terminal from his left shoulder into his hand, and then stepped behind a dockside pillar. The UNAC bus was there, snugged into its bay, white and black, the roof chitinous with accumulators, the windows polarized, the doors folding open now while the party rippled to a halt. Norwood half turned, directly in front of Michaelmas, almost in the doorway, tossing a joke back over his shoulder, one hand on an upright metal stanchion, as the group narrowed itself down to file in. Michaelmas was chatting with a press aide. "Crowded here, aren't we?" he remarked, and laid a corner of the dangling terminal up against Norwood's calf muscle just below the back of the knee, so gently, so surely, so undetectably that he half expected to hear the pang of a harmonic note. But instead Norwood sagged suddenly

just a little on that side. His hand clutched the stanchion whitely, and the point of his shoe kicked against the step riser. His eyes widened at betrayal. He moved on, and in, and sat down quickly in the nearest of the individual swiveling chairs. As the bus filled and closed, and then rolled out through the insulated gates, Michaelmas could see him chatting and grinning but flexing the calf again and again, as if it were a sweet wife who'd once kissed a stranger. I could have done worse by you, Michaelmas thought, but it was nevertheless unpleasant to watch the trouser fabric twitching.

The bus rolled smoothly along the ramps among the towers, aiming for the hills and then Afrique Control. "Would you like to speak to Norwood now?" Frontiere asked, leaning across the aisle. "We will arrive at quarter-to-three, so there is half an hour."

Michaelmas shook his head. "No, thank you, Getulio," he smiled, making himself look a little wan. "I think I'll rest a bit. It's been a long day." He reclined lower in his seat. "I would like to see Papashvilly as soon as possible after we reach Control. My crew chief is Mr. Raschid Samir, and he'll be arriving by truck at the same time."

"Yes, that's arranged. Pavel is waiting for you. He says to

meanwhile tell you the story about the aardvark and Marie Antoinette."

"It's the same as the story about the aardvark and Isadora Duncan, except that the Isadora Duncan version is better, since she is wearing a long scarf at the time."

"Ah."

"And could you let me know if you hear from Josip about the sender?"

"On the instant."

"*Grazie.*" Michaelmas settled his head deeper between the sound-absorbent wings of his chair and closed his eyes.

Domino said: "The joke about the aardvark and Isadora Duncan is the same as the joke about the aardvark and Annie Oakley, except that Annie is firing a Sharps repeating carbine."

Coarse, scoured, and ivory-colored in the sun beyond the autobus windows, the foothills rose under the toned blue of the sky.

There had been a time on Papashvilly's U.S. tour, after Norwood was dead. They were at a sports car track in the gravel hills of eastern Long Island. Rudi Cherpenco had been conducting some tire tests, and offered Papashvilly a ride if he had time. UNAC had thought it a fine idea, if Michaelmas or someone of that stature would cover it. Pavel had taken once around the track to learn how

to drift and how to steer with the accelerator, and half around to learn how to brake and to deduce good braking points, and by then his adrenalin was well up. He went around five times more; he could be seen laughing and shouting in the cockpit as he drilled past the little cluster of support vehicles. When he was finally flagged off, he came in flushed and large-eyed, trembling. "Oy ah!" he had shouted, vaulting out of the cockpit. "*Jiesus Maria*, what a thing this is to do!" He jumped at Cherpenko. They guffawed and embraced, slamming their heads down between each other's shoulderblades with the car's engine pinging and contracting beside them as it cooled. Yet Michaelmas had caught the onset of sobriety in Papashvilly's eyes. He was laughing and shaking his head, but when he saw that Michaelmas was seeing the change in him, he returned a little flicker of a rueful smile.

Late that night in the rough-timbered bar of the Inn, with Cherpenko asleep in his room because of the early schedule, and the crew people off raising hell on Shelter Island, Papashvilly had sat staring out the window, beyond the reflection of their table candle, and beyond the silhouettes of docked cabin boats. Michaelmas had listened.

"It is an intoxication," Papash-

villy had begun. As he went on, his voice quickened whenever he pictured the things he was talking about, slowed and lowered when he explained what they meant. "It takes hold."

Michaelmas smiled. "And you are back in the days of George the Resplendent?"

Papashvilly turned his glance momentarily sideward at Michaelmas. He laughed softly. "Ah, George Lasha of the Bagratid Empire. Yes, a famous figure. No, I think perhaps I go back farther than 800 years. You call me Georgian. In the Muscovite language, I am presumed a Gruzian. Certain careless speakers from my geographic area yet refer to Sakartvelo, the united kingdom. Well, some of us are very ambitious. And I cannot deny that in my blood there is perhaps some trace of the great Kartlos, and that I am of the eastern kingdom, that is, a Kartvelian."

He was drinking gin, as an experiment. He raised his glass, wrinkled his nose, swallowed and smiled at the window. "There have been certain intrusions on the blood since even long before the person you call Aleksandr the Great came with his soldiers to see if it was true about the golden fleece, when Sakartvelo was the land of Colchis. I am perhaps a little Mingrelian, a little Kakhetian,

a little Javakhete, a little Mongol..." He put his hand out flat, thumb and palm down, and trembled it slightly. "A little of this and that." He closed his fist. "But my mother told me on her knee that I am an Ossete of the high grassy pastures, and we were there before anyone spoke or wrote of any other people in those highlands. We have never relinquished them. No, not to the Turks, not to Timur the Lame and his elephants, nor to the six-legged Mongols. It was different, of course, in the lowlands, though those are stout men." He nodded to himself. "Stout men. But they had empires and relinquished them."

He put down his glass again and held it as if to keep it from rising, while he looked at it inattentively. "To the south of us is a flood of stone; the mountain, Ararat, and the Elburz, and Iran, and Karakorum, and Himalaya. To the north of us is the grass that rolls from the eastern world and breaks against the Urals. To the east and west of us are seas like walls; it is the grass and stone that toss us on their surf. Hard men from the north seek Anatolia and the fat sultanates. Hard men from the south seek the Khirgiz pastures and the back door to Europe. Two thousand years and more we clung to our passes and raided from our passes, becoming six-legged in our turn, until the sultans tired, and

until the Ivan Grodznoi, whom you call The Terrible, with his cannon crushed the Mongols of the north." Papashvilly nodded again. "And so he freed his race that Timur-i-leng created and called slaves —" Papashvilly shrugged. "Perhaps they are free forever. Who knows? Time passes. We look south, we look north, we see the orchards, we smell the grass. Our horses canter and paw the air. But we cling, do we not, because the age of the six-legged is over, is it not? Now we are a Soviet Socialist republic and we have the privilege of protecting Muscovy from the south. Especially since Josip. Perversity! Our children have the privilege of going to Muscovite academies if we are eligible, and..." He put his hand on Michaelmas's forearm. "But of how much interest is this to you? In your half of the world, there is of course no history, but where I was born there has been so much blood and seed spilled on the same ground over and over that sometimes there are new men, they say, who are found in the pastures after the fog; men who go about their business unspeaking, and without mothers."

Papashvilly put down his empty glass. "Do they have coffee here with whiskey in it? I think I like that better. Ah, this business with the sports car..." He shook his head. "You know, it is true — all

we peoples who live by the horse — not your sportsmen or your hobbyists, not anyone who is free to go elsewhere and wear a different face — we say that man is six-legged who no longer counts the number of his legs. But this is not love of the animal; it is love of the self as the self is made greater, and why hide it? Let me tell you how it must be — I think if Dzinghiz Khan — I give him this, the devil, they still speak his name familiarly even on the Amber Sea — if the Dzinghiz Khan had been shown an armored car, there would have been great feasts upon horseflesh in that season, and thereafter the fat cities would have been taxed by the 200-liter drum. The horse is a stubborn, dirty, stupid animal that reminds me of a sheep. Its only use is to embody the wings a man feels within him, and to do this it lathers and sweats, defecates and steps in badger holes."

They were well into the hills, now. Champion was smiling at Norwood and trying to get him into conversation. Norwood was shaking his head silently. Clementine was stretched out in her seat, sipping through a straw at an ice from the refreshment bar, raising one eyebrow as she chatted with Luis. It seemed reasonable to suppose they had been a great many places together, and that she and the slim, self-possessed good-looking fellow

shared a number of reminiscences. Michaelmas chewed his tongue. He grimaced and closed his eyes again.

Domino said: "The European Flight Authority has determined the cause of Watson's crash."

Michaelmas sat up. They were coming out of the hills, now, and whirling down the flats, leaving a plume of finely-divided dust along the shoulder of the highway. "What was it?"

"Desiccator failure."

"Eh?"

"The most efficient engine working fluid is, unfortunately, also extremely hygroscopic. It's practically impossible to store or handle it for any length of time without its becoming contaminated with water absorbed from the air. So in use the fluid passes through a desiccator which extracts the water as it circulates, and vents it as steam. The safety record of the model Watson was flying is good, and indicates no persistent characteristic defect. However, this is not as true of an earlier model, which showed something of a tendency to blockage in its condenser coils. They froze now and then causing a stoppage of working fluid circulation, and consequent pressure drop followed by an emergency landing or a crash due to power loss."

"Power loss," Michaelmas said. "Like Watson."

"But not quite for the same reason. This is a more recent model, remember. In the earlier ones, it had been found that the downdraft from the helicopter rotors, under certain conditions of temperature and humidity, was creating cold spots in the coils, and causing plugs of ice. So they developed and installed a high-capacity electrically-heated desiccator. The load on the helicopter's electrical system is small, the steam vent is parallel to the helicopter's long axis so that some of the energy is recovered as an increment of forward motion, and the whole thing has the sort of simplicity that appeals."

"But the unit failed in this case," Michaelmas said.

"It has happened only twice before, and never over Alpine terrain in gusty wind conditions. These were its first two fatalities. What happens if the electrical heating fails is that the extracted moisture vents as water rather than steam, gradually forming a cap of ice, which then creates a backup in the desiccator. The physics of it all then interact with the engineering to rupture the final stage of the desiccator, and this creates a large hole in the plumbing. All the high-pressure vapor vents out, in preference to entering the condenser, and half a cycle later, the turbine has nothing to work with."

"A very dangerous design."

"Most add-on parts have to compromise-fit the basic hardware, and have to add as little as possible to total unit cost, since they inevitably skew the original profit projections. But as it happens this is a rather good design. The electricity comes from a magneto, gear-driven by the output shaft. The wiring, which you would expect to be the weak spot, is vibration-proofed, and uses astronautics-grade insulation and fasteners. It is also located so that no other part can rub through it, and is routed away from all routine service hatches so that fuel-loaders, fluid-handlers and other non-mechanics servicing the vehicle cannot accidentally damage the unit. The desiccator has its own inspection hatch, and only certified mechanics are shown how to operate the type of latch used."

They were clearly targeted on Control Tower now; staring forward with his eyes half-focused, Michaelmas could see the structure larger than any of the others, dead ahead, and apparently widening out to either side of the tapering white thread of highway. He glanced back through the rear window; they were being followed by a short caravan of trucks. The lead unit, a white, ground-hugging Oskar with shooting platforms collapsed against its sides like extra accumulators, carried the sunburst

insignia of Mr. Samir's crew.

"Then what happened?"

"The European Flight Authority found one wire hanging."

Michaelmas nodded to himself, then grinned humorlessly and looked around for a moment. Everyone was busy doing something or nothing. "What did they think of that?"

"They're not sure. The connection is made with a device called a Pozipfastner; it snaps on, never opens of itself, and nominally requires a special tool for removal."

"Nominally?"

"The fastener sells because it's obviously tamperproof; any purchasing agent can demonstrate to his supervisor that the connection can't break, can't shake loose, and can't be taken apart with a screwdriver or a knife blade. The special removal tool has two opposed-loaded fingerlets that apply a precise amount of pressure to two specific points. It's an aerospace development. But any mechanic with any experience at all can open any Pozipfastner by flicking it with his index fingernails. It's a trick that takes almost no practice, and most of them do it; it's much quicker than using the tool."

"And I presume anyone on any aircraft service crew knows how to work the special latches that only certified mechanics understand."

"Of course. How could any-

thing get done on time if the nearest man couldn't lend a hand?"

Michaelmas pursed his lips. "What do you make of that wire?"

"Sabotage. The AEV really thinks so too, but they can't bring themselves to accept the idea. Nevertheless, the unit flew without incident early this morning from a charter service to meet Watson. It was parked while Watson held a meeting with his network's local people, but it certainly wasn't serviced during that time. While Watson was talking, someone deliberately opened that hatch and then either used the factory tool or did the fingernail trick."

"How was it done? Did Cikou-mas hang around the airport? Of course not. What sanatorium employee? What henchman? Who?"

"I'm working on it. Meanwhile, Daugerd's plane has just landed at Hanrassy's dock. Time there is 7:35 AM."

Michaelmas glanced at his wrist. 2:35 PM.

Frontiere leaned across the aisle. "Ten more minutes, Laurent, and we'll be there." Simultaneously, his telephone sounded. He reached into his jacket, took out the instrument, and inserted the privacy plug in his ear, answering the call with his mouth close to the microphone. Then he recoiled

pleasurably. "*Dei grazia*," he said, put the phone away, and stared at Michaelmas incredulously. "You were exactly correct in your jest," he said. He leaned closer. "The sender looks Russian. The assembly technique is Russian. But our analytical equipment shows that some of the *material* only resembles stock Russian material; the molecular structure is off. Our analytical programs caught it and the ones Norwood used at Limberg's did not. A very sophisticated effort was made to take circuit material and make it *seem* like other circuit material of no greater or lesser practicality. Why would the Russians do that? Why should they if they expected it to be destroyed? No, someone *is* trying to muddle things up. But we can be rather sure it isn't the Chinese, and if it isn't they or the Russians, then the situation is nowhere near as critical." Frontiere grinned. "It's just some accursed radical group that didn't even kill anybody. We can handle that." He sat up straighter. "We were right to delay." He drummed his fingers on the armrest. "All right. What now?" he said absently, his eyes still shining. "What must be done immediately?"

"Well," Michaelmas said equably, "there is still the problem of forestalling Norwood and Limberg. Steps of some sort must be taken

quickly. It would be particularly galling now if one or the other lost patience and blurted out his error in all honesty."

Frontiere grimaced. "Just so."

"So I suggest," Michaelmas went on, "that the analytical tests be re-run immediately in your laboratories with Norwood in attendance. In fact, let him do the running. And when he gets the correct result, let him call Limberg with it. It's no disgrace to have been wrong. It's only a minor sin of eagerness not to have waited in the first place to use your lab and your engineering analysis computer programs. It's only natural that your equipment would be subtler and more thorough than anything Norwood and Limberg were able to graft onto Limberg's medical software. And Limberg will understand that until the real culprits are identified, absolute silence about the existence of the sender is the best hope of unearthing them."

Frontiere blinked. "You have a swift mind, Laurent." He frowned slowly. "There may be difficulty. Norwood may not be entirely willing to accept results different from those he found for himself."

Michaelmas glanced down the aisle. "I think you may find him less sure of himself than he has hitherto appeared. More ready to consider that his faculties might err from time to time."

Frontiere's eyes followed Michaelmas's. Norwood was sitting with one heel hooked on the edge of the seat, his chin resting on his knee. His hands were clasped over his shin. His thumbs absently massaged at his calf, while he sat silently looking out the window as if cataloguing the familiar things of his youth while the bus sped in among the outbuildings and the perimeter installations. Frontiere contracted his lower lip and raised an eyebrow. He looked over at Michaelmas. "You are a shrewd observer." He stood up smoothly. "Excuse me. I will go speak to him." He touched Michaelmas's shoulder. "You are an encouraging person to know," he said, and moved easily down the aisle.

Michaelmas smiled. "Well, Domino, congratulations."

"I simply took your hint. Now, the interesting news. I did in fact cause UNAC's analytical apparatus to produce the desired result. A competent molecular physicist examining the readouts will be able to determine exactly with what plausible and fully worthy action group the sender is most likely to have originated. Nevertheless, we are not dealing one hundred percent in deception."

"Oh?"

"Daugerd will never find it simply by looking at holograms. UNAC's programs would never have

found it unaided. The difference isn't gross. But it's there; there's something about the electrons...."

"Something about the electrons?"

"It's... they're all *right*; I mean, they're in the correct places in the proper number, as far as one can tell, and yet...."

"Can you give me more detail?"

"I— No. I don't think so."

"Are you saying the sender was produced by some organization on the order of a normal dissident group?"

"No— I don't think so. I don't think— I don't believe there is material exactly like that."

"Ah." Michaelmas sat deeper in his chair. The bus entered the shadow of Control Tower, and the windows lightened. The landscape beyond the shadow became a blaze of white. "Did you feel as you did at the sanatorium?"

"I... couldn't say. Probably. Yes. I think so."

The bus was pulling up to a halt among the colonnades and metalized glass of the ground level. People began rising to their feet. Mr. Samir, Michaelmas noted through his window, had gotten the Oskar in through the portal and was parking nearby; the sides of the little van metamorphosed into an array of platforms, and a technician was out of the truck and up on the topmost one instantly, slipping one

camera into its mount, and reaching down to take another being handed up to him. "What about Norwood?" Michaelmas asked. "When you touched him."

"Norwood? Nor — ? No, I wasn't getting anything through the sensors in that terminal. You wouldn't find it with sensors; you have to be electron-to-electron with it. . . . Norwood? What an interesting question! No — there's no way. There's no interface, you see. There's only data. No, I could only feel that with something approximating my own kind."

Michaelmas was watching Norwood in conversation with Frontiere. Frontiere was talking intently and softly, holding one hand on Norwood's shoulder and tapping lightly on Norwood's chest with the spread fingers of the other. It was over in a moment. Norwood shrugged and nodded, his eyes downcast. Frontiere smiled and put his arm protectively around Norwood's shoulders in goodnatured bonhomie.

"An interesting statement. But hardly relevant at this moment," Michaelmas said. "Your sensors *were* adequate to measure his belief in himself."

"As any other lie detector would have."

"That may be as much detection as any man needs. Well — we're off." The bus was

emptying. To keep in trim, Michaelmas stepped forward deftly and debarked just behind Norwood and Frontiere, into view of the world's cameras. Not only Josip Sakal but Hjalmar Wirkola himself were waiting to greet Norwood, all smiles now. Frontiere propelled the astronaut gently toward the Director General. The stately, straight-backed old gentleman stepped forward from Sakal's side as Norwood approached, and extended his hand. "My boy!" Wirkola said, clasping the astronaut's handshake between his palms. "I was so glad when Josip told me you are all safe now."

The crowd built up around them; Michaelmas could see additional UNAC people coming out to the foyer. Getulio's press aides were bringing them forward through the more casual onlookers and the news people. There was a lot you could do with a properly swung hip and a strategically insinuated shoulder to create lanes in a crowd without it showing on camera. Papashvilly was coming out now, just stepping through the doors, his head up, his shoulders back, his grin delighted as he moved toward the main group. He was waving at Norwood. As his glance reached Michaelmas, who was making his way across Luis's line of sight on Norwood, he momentarily shifted the direction

of his wave, and wagged two fingers at him, before redirecting himself to the welcome at hand. Michaelmas raised a clenched fist, one thumb up, and shook it. Clementine Gervaise stepped on Michaelmas's foot. "*Pardon*," she said, the corners of her mouth quivering slightly and her eyes a little wider and shining more than normal, "You are blocking my camera, Laurent." Michaelmas stared at her. "Excuse me," he said, wondering if they would now spend days giggling at each other. "It was innocent, I assure you," he said and pushed on, his eyes sliding off Campion's face enroute.

"Hanrassy is punching up Gately's number," Domino said.

Michaelmas stopped, changed direction, and began working his way clear. "I'll want to monitor that," he said, and pulled the plug out of the terminal, inserting it in his ear as he went, to account for the fact that he was stepping out of the crowd and standing with an intent expression, his hand over his free ear to shut out other sounds. He stood apparently oblivious, while Gately's secretary fielded the call and then put Hanrassy through.

"I want you to look at something, Mr. Secretary," she said without preamble.

Domino said: "She's showing him a holo on the sender."

"Yes," Michaelmas said. He clenched his jaw.

"I see it, Miz Hanrassy. Should I recognize it?" Gately said.

"That would depend on how familiar you expect to be with Soviet electronic devices."

"I don't follow you, Ma'am. Is that thing Russian?"

"It is, Mr. Secretary. There's no doubt of it; it's not exactly a standard component in their engineering, but it's made of standard pieces and the workmanship is characteristically theirs."

"Yes, Ma'am, and in what way is that relevant to my duties?"

"I wonder if you'd care to call Colonel Norwood and ask him if he found it in his capsule just before he was forced to escape."

Michaelmas took a deep breath. "That's it, then," he said to Domino steadily. "There is no further doubt. Limberg and Cikoumas supplied it to her, along with their story. They don't have the slightest sense of restraint or responsibility. They think we are an ant farm."

"Ma'am," Gately was saying, "are you telling me the Russkis sabotaged Norwood's shuttle and you can *prove* it?"

"The sons of bitches," Michaelmas said. "The bastards. Get me to the sanatorium. Right now. And I arrive without warning. Right?"

"Right."

Viola Hanrassy said: "Ask Norwood, Mr. Secretary. Ask him why UNAC hasn't let him say anything about it."

"Ma'am, where'd you get this information?"

"If you obtain corroboration from Norwood, Mr. Secretary, then I'll be glad to discuss details with you. In fact, Will, I'm holding myself in readiness to work very closely with you on this. We may have the joint duty of alerting the American people to their responsibilities and opportunities in the coming election."

Domino said: "I think that may have been an offer of the vice presidency."

"Bribes," Michaelmas said. "They always go to bribes when they're not sure they're on top. And coercion when they are. That's all they know. They really don't believe anyone would help them just on their merits. Well, Christ, at least they're our own. How's my ride to Berne?"

Gately was saying: "I'll call Africa right away and get back to you."

"Thank you, Mr. Secretary."

"And kiss my bum, both of you," Michaelmas muttered as the connection broke. He was looking around with sharp, darting swings of his eyes, his hands raised in front of him and his feet well apart, so that he was leaning forward against

his weight.

"Mr. Michaelmas, get to the airport."

"Right."

He strode directly toward Mr. Samir. "How do you do," he said, thrusting his hand forward.

"How do you do, sir," Mr. Samir said, responding with a calloused palm and a dignified smile. "What are my instructions?"

"There has been a change of plans. I would like to be driven back to Cite D'Afrique immediately."

"As you wish." He turned toward his crew, snapped his fingers and gestured. The men began clambering at the sides of the Oskar. "We depart in ninety seconds."

"Thank you." He looked around, and found a press aide preparing to hold the door into the interior lobbies. He paced toward him. "Harry," he said in a low voice. "Please accept my apologies and convey them to Getulio, to Pavel, and the rest. There is another story I must cover in person. I'll be patching back to you as soon as I can."

The aide looked startled. "No problem," he said automatically.

"Thank you very much." Michaelmas turned away, and went. He waved to Clementine and got into the Oskar beside Mr. Samir. The lowering door inter-

posed tinted glass across her startled expression. She turned to Campion and nudged his arm. They both looked toward the Oskar as it snapped sideward out of its parking groove and oriented on the outer portal. Mr. Samir himself was driving, his shirtsleeves rolled back from forearms like Indian clubs; the crew, looking curiously forward toward Michaelmas, were still latching down gear and strapping themselves to their seats in the back cargo space.

"I'll call you," Michaelmas pantomimed toward Clementine, holding up his telephone and mock-punching numbers. But what will I call you? he thought, pushing the 'phone back into his jacket. He waved to Papashvilly, who raised his eyebrows. Mr. Samir accelerated. The portal opened, closed behind them and, computer-monitored, stayed obstinately closed when one news crew tried to follow the famous Mr. Michaelmas and learn what he might be after.

Mr Samir drove hard. The bristling white van hissed wickedly down the highway eastward. "The airport, please, Mr. Samir," Michaelmas said.

"The military gates," Domino said.

"There are no commercial flights to anywhere for some time," Mr. Samir said. "Do you wish a charter?"

"No, Mr. Samir. Charters file flight plans. I will go to the military end of the field, please."

Mr. Samir nodded. "As you wish. We shall probably remember that you asked to be taken to the Hilton."

"That is always a possibility. My thanks."

"I regret that our opportunity to serve has been so limited."

"I will be sending you back to Afrique Control as soon as you've dropped me. And there will be other times we can work together in person; I anticipate them with pleasure."

"It is mutual."

Domino said: "Gately has a call in for Norwood. They're holding; Norwood should be free in a few minutes. I think UNAC's anticipating a simple message of congratulations from the U.S. administration. They'll put it through quickly."

Michaelmas's mouth thinned into an edged smile. "Good." He watched the desert hurtling past.

"Joe Campion," Domino said.

"Say again."

"While in Chicago at WKMM, Campion was on the crimecopter crew for a year and a half. They flew a model identical to the one in which Watson crashed. They never had any mechanical failures. But the pilot had had a coil-freezeup while flying the earlier model. The station used one until a few months

before Campion joined their staff. The pilot put it down in Lincoln Park without further incident, and not much was made of it. But in a year and a half of making conversation five days a week, he probably would have mentioned it to Campion. That could have led to a clinical discussion of causes and cures. I think Campion could have learned how to work latches and Pozipfastners. I think he would know which wire to pull."

Michaelmas bowed his head. "That's pretty circumstantial," he said at last.

"Campion is also on the short list of persons who could have gotten to the machine; Watson was busy talking to his staff, but Campion would already know what he was going to say, and could wander off."

"Being on the list doesn't prove. . . ."

"I have attempted to establish corroboration. I found that *National Geographic* had leased facilities on an AP Newsfeatures satellite that was passing over Switzerland at the time. They were using its infrared mapping capability for a story on glacial flow. I went through their data and played a few reprocessing tricks with a segment covering Berne. I have identified thermal tracks that correspond to Watson, the helicopter pilot, and several people who must number

Campion among them. I have isolated one track as being Campion with 82 percent certainty. That track leaves the knot of people around Watson, walks around a corner to the helicopter, pauses beside the fuselage at the right place for the proper amount of time, and then rejoins the group."

Michaelmas said nothing. Then after a while he said: "I hate acting on probability."

"You go to your church and I'll go to mine."

Michaelmas shook his head. Mr. Samir, who doubtless had excellent peripheral vision, appeared to blink once, sharply, but he continued to drive relentlessly.

Oh, yes. Yes. It was as plain as the nose in your mirror. The poor, silly, ambitious son of a bitch had known exactly what would happen. The helicopter would ice up, set down uneventfully in the local equivalent of Lincoln Park, but at some remove from the nearest cab stand, and Joe Campion instead of Horse Watson would be the main spokesman on worldwide air. Afterward, Horse would be rescued, and it would just have been one of those things.

And how did he salve himself now, assuming he felt the need? That, too, wasn't particularly difficult. He'd understood all the factors, hadn't he? He'd calculated the risk exactly. All right, then,

he'd done everything needful; bad luck had killed two people, one of whom happened to be his professional superior, thus creating a permanent vacancy at a higher rung on the ladder; it was funny how Fate worked.

"Keep him busy," Michaelmas growled.

"It's done," Domino said at once.

"Thank you."

"I have Gately's call to Norwood," Domino said as they swept out of the hills and plunged toward the city. "Norwood's in Wirkola's office now."

"Put it on."

"Right."

"Walt? Walt, hey, boy, this is Willie!" began in Michaelmas's ear, and continued for some time, during which the expected congratulations and the obligatory God Damns were deployed. Then Gately said: "Listen, son — can I ask you about something, between the two of us? You got many people looking over your shoulder right this minute?"

"No, not too many, sir. I'm in Mr. Wirkola's office, and there's no one here who isn't UNAC."

"Well, that — forgive me, son, but that may not be —"

"It's OK, Mr. Secretary."

There was a pause. Then Gately made a frustrated, snorting noise.

"OK. What the hell. Have a look — do you recognize this?"

"Yes, sir, I do," Norwood said. "I'm a little surprised to see you have a picture of it." There was the sound of a palm being placed over a microphone, and then being lifted off. "Mr Secretary, have you heard that thing is Russian?"

"That's exactly what I've heard. I've also heard UNAC won't let you say so. How are you today, Mr. Wirkola?"

Norwood said: "Mr. Secretary, I'm looking at a materials analysis printout that says the core component was made by spark-eroding a piece of G.E. Lithoplaque until it looks a lot like U.S.S.R. Grade II Approved stock. You'd think that could work because Grade II is manufactured someplace south of Kiev using equipment purchased from G.E. and utilizing G.E. processes under license. But G.E. went to a smooth from a matte finish on Lithoplaque last year, whereas Grade II didn't. You might figure you could carve back to the old configuration. But you can't; G.E. also changed the structure a little. And it's only in limited distribution. According to what I see here, the only place you could get that particular piece we're talking about is G.E.'s central midwestern supply warehouse in St. Louis."

"St. Louis?"

Mr. Wirkola said: "I am fine. And how are you, Mr. Gately?"

There was a long silence. "You're sure, Walter?"

"Well, to satisfy myself I'm immediately going to pass the thing through the labs here again. I've got to admit I damned near made a fool of myself about it once, and I don't want to do that twice. But we're working with the best hardware and software in the world when it comes to engineering, around here, and I've strapped myself into it many's the time without a second thought. I've got a feeling I could run this baby through any modern equipment in the world and come up with the same answer."

"Mr. Wirkola, I appreciate UNAC's discretion in this matter," Gately said. "I'm assuming you'll be in touch with me officially about this?"

"Yes," Wirkola said. "We are assigning Colonel Norwood to temporary duty as our liaison with the U.S. government on this matter. I suggest a goodwill tour of the U.S.A. as a cover for his talks with your president and yourself. but he will call you a little later today with confirmation from his re-tests, and that will have given you time to consult with Mr. Westrum on your response to that suggestion. You may tell Mr. Westrum we understand his

political situation, and we certainly do not wish to inculcate any unnecessary constraints upon his conscience. Nevertheless, I think there may be better ways to slide this incident into the back shelves of history, than by any public counterclaiming between Mr. Westrum and whoever your informant may have been. What is done privately is of course private."

"Thank you, Mr. Wirkola," Gately said. "I'll speak to my president and be waiting on Colonel Norwood's call."

"Thank you, Mr. Secretary. We are grateful for your cooperation."

"Bye, Walter. Good to talk to you, son."

"Thank you, Mr. Secretary."

The connection opened. The van was on the city ramps now, sliding smoothly between the beautiful new structures, humming toward the airport. Domino said: "I can see why you favored Mr. Wirkola's election as Director General."

"That's not what you see. What you see is why it wasn't necessary to do anything with the vote. His virtues are evident even to an election committee. Eschew the sin of overmanagement; that above all. You don't want to lose respect for the Hjalmar Wirkolas of this world."

"Noted. As before."

Michaelmas signed. "I didn't

mean to nag."

When he was young, and had to work on the East Coast because he wanted to take extension courses at MIT, he had called his wife often at Northwestern, in Evanston, Illinois. He would say: "I can get a ride to Youngstown over Friday night with this fellow who lives there, and then if I can get a hitch up U.S. 30, I could be in Chicago by Saturday late, or Sunday morning. I don't have any classes back here until Tuesday, and I can call in sick to work." She would say: "Oh, that sounds like a lot of trouble for just a few hours. And I think I have to be at a call all day Monday anyhow." He would say: "But I don't mind," and she would say: "I don't want you to do it. It's more important for you to be where you are." And he had said more, patiently, but so had she. That had been back when Domino had just been a device for making telephone calls.

He made his voice audible: "Mr. Samir, after you've delivered me, I'd like you to go back to Afrique Control and interview Major Papashvilly. Permission's all arranged. After I'm airborne, I'll call Signor Frontiere and the Major, and tell them you're coming and what we'll do."

"Right," Domino said.

"I understand," Mr. Samir replied. "I am proud of your

reliance upon me."

Michaelmas smiled trustfully at him. "You have it. I'll be on the phone with you, giving you the questions to ask, and you'll pick up the Major's responses."

"No problem," Domino said.

"I understand completely," Mr. Samir said.

"Then there's no difficulty," Michaelmas said. "Thank you."

Mr. Samir's footage would be fed to his network's editing storage and held for mixing. Via Domino, the network would also receive footage of Michaelmas asking the questions, commenting, and reacting to Papashvilly's answers. The network editing computer would then mix a complete interview out of the two components.

"What'll you want?" Domino asked. "A how's-it-going-Pavel, or a give-us-the-big-picture, or a roundup conversation including how he reacts to Norwood's return, or what?"

"Give us the roundup," Michaelmas said. "He'll be good at that. We just want to reinforce the idea he's a bright, quick, fine fellow and he's going to do a hell of a job." And mostly, they were simply going to keep Papashvilly in a controlled situation among friendly people for the next hour or two. It would do no harm. And it would maintain L.G. Michaelmas's reputation for never scrubbing a job

even if he had to be in two places at the same time, damn near, and it was good to remind yourself there were plenty of competent crews and directors around. "And, listen, make sure I'm in character when I phone Pavel about this."

"Don't worry about that. Chat before shooting. Friends reunited. Buy you a drink soonest."

"Fine."

"You know, I suspect you favor him over Norwood because you think someday he might just go out and keep going. Norwood would always come back, wouldn't he?"

"I favor him because he's human," Michaelmas said shortly. He rubbed his thumb and fingers over his eyelids, head bowed momentarily, aware that when he slumped like this, he could notice the fatigue in his back and shoulders.

Something overhead was coming down as if on a string, metallic and glimmering; God's lure. The military gates opened smoothly, so that the Oskar barely slowed. The guard nodded at their number plate and saluted, good soldier, explicit orders fresh in the gate shack teleprinter. The van moved toward the flight line. "What is that?" Mr. Samir asked, looking up and out through the windscreen. He braked hard and stopped them at the edge of a hardstand.

The aircraft became recogniz-

able overhead as a cruelly angled silvery wedge balanced on its tailpipes, but as it neared the ground its flanks began to open into stabilizer surfaces, landing struts and blast deflectors.

"I believe that is a Type Beta Peacekeeper," Michaelmas said. "They are operated by the Norwegian Air Militia. I wouldn't open any doors or windows until it's down and the engines are idled." The windscreen glass began shivering in its gaskets, and the metal fabric of the Oskar began to drum.

Domino said: "It's on a routine checkride to Kirkenes from the base at Cap Norvegia in the Antarctic. It's now had additions to the mission profile for purposes of further crew training. What you see is an equatorial sea level touch-down; another has been changed-in for the continental mountains near Berne. Excellent practice. Meantime, one unidentified passenger will be aboard on priority request from the local embassy which, like many another, occasionally does things that receive no explanation and whose existence is denied and unrecorded. Hardstand contact here is in thirty seconds; a boarding ladder will deploy. Your programmed flying time is twenty minutes. *Bon voyage.*" The Beta came to rest. The engines quieted into a low rumble that caused little grains of stone to dance an inch

above the concrete.

"Goodbye, Mr. Samir. thank you," Michaelmas said. He popped open the door and trotted through the blasts of sunlight, hugging the little black box to his ribs. A ladder ramp meant to accommodate an outrushing full riot squad folded down out of the fuselage like a backhand return. He scrambled up it into the load space, which was a padded, nevertheless thrumming off-green compartment with hydraulically articulated seats that hung empty on this mission. He dropped into one and began pulling straps into place. The ladder swung up and sealed.

"Are you seated and secure, sir?" asked an intercom voice from somewhere beyond the blank upper bulkhead. He sorted through the accent and hasty memories of the language. He snapped the last buckle into place. "Ja," he said, pronouncing the 'a' somewhere nearer 'o' than he might have, and hoping that would do. "Then we're going," said the unseen flight crew member, and the Type Beta first flowed upward and then burst upward. Michaelmas's jaw sagged, and he tilted back deeply against the airbagged cushions. His arms trailed out over the armrests. He said slowly to Domino: "One must always be cautious when one rubs your lamp." But he sat unsmiling, and while there might have been

times when he would have been secretly delighted with the silent robotics of the seat suspensions, which kept him ever facing the direction of acceleration as the Peacekeeper topped out its ballistic curve and prepared to swap ends, he was gnawing at other secrets now. He drummed his fingertips on the cushiony armrest and squirmed. His mouth assumed the expression he kept from himself. "We have a few minutes," he said at last. "Is this compartment secure?"

"Yes, sir."

"I think we might let Joe Campion find me at this time."

His phone rang. "Hello?" he said.

"What? Who's this? I was calling —" Campion said.

"This is Laurent Michaelmas."

"Larry! Jesus, the damndest things are happening. How'd I get you? I'm standing here in the UNAC lobby just trying to get through to my network again. Something's really screwed up."

Michaelmas sat back. "What seems to be the trouble, Joe? Is there some way I can help you?"

"Man, I hope somebody can. I — well, hell, you're the first call I've gotten made in this last half hour. Would you believe that? No matter who I call, it's always busy. My network's busy, the cab company's busy. When I tried a test by calling Gervaise from across the

room, I got a busy signal. And she wasn't using her phone. Something's crazy."

"It sounds like a malfunction in your instrument."

"Yeah. Yeah, but the same kinds of things happened when I went over and borrowed hers. Look, I don't mean to sound like somebody in an Edgar Allen Poe, but I can't even reach phone Repair Service."

"Good heavens! What will you do if this curse extends?"

"What do you mean?"

"Have you had anyone call you since this happened?"

"No. No — you mean, can anybody reach *me*?"

"Yes, there's that. Then, of course, a natural thing to wonder about is whether your bank is able to receive and honor credit transfers, whether the Treasury Department is continuing to receive and okay your current tax flow. . . . That sort of thing. Assuming now that you find some way to get back across the ocean, will your building security system recognize you?" He chuckled easily. "Wouldn't that be a pretty pickle? You'd become famous, if anyone could find you."

"My god, Larry, that's not funny."

"Oh, it's not likely to be lifelong, is it? Whatever this thing is? It's just some little glitch somewhere, I should think. Don't

you expect it'll clear up?"

"I don't know. I don't know what the hell. Look — where are you, anyway? What made you take off like that? What's going on?"

"Oh, I'm chasing a story. You know what that's like. How do you feel? Do you think it's really serious?"

"Yeah — listen, could you call Repair Service for me? This crazy thing won't let even Gervaise or anybody here do it when I ask them. But if you're off someplace in the city, that ought to be far enough away from whatever this short circuit is or whatever."

"Of course. What's you —" Michaelmas closed his phone and sat again while the aircraft flew. He pictured Campion turning to Gervaise again.

"Mr. Michaelmas," Domino said after some silence.

"Yes."

"Gately's talked to Westrum."

"Yes."

"When they get confirmation from Norwood, they'll accept Wirkola's plan. Then Westrum will call Hanrassy and play her a recording of Norwood's confirming data. Gately was very pleased that Mr. Westrum was making it unnecessary for Gately to speak to her at all."

"It's funny how things work out."

"You'll be landing in a few

moments. Touchdown point is the meadow beyond the sanatorium parking lot. Even so, we may unsettle the patients."

"Can't be helped. If they can stand news crews, they can absorb anything. That's fine, Domino. Thank you."

There was another pause.

"Mr. Michaelmas."

"Yes."

"I'll stay as close as I can. I don't know how near that will be. If any opportunity affords itself, I'll be there."

"I know."

The flight crewman's voice said: "We are coming down now. A bell will ring." The vibration became fuller, and the tone of the engines changed. Michaelmas sank and rose in his cushions, cradling the terminal in his hands. There was a thump. The bell rang and the ladder flew open. Michaelmas hit his quick release, slid out of his straps, and dropped down the ladder. "*Danke*," he said.

He stepped out into the meadow above the parking lot, looking down at where they'd been parked, and the long steps down which the lens had rolled. He strode quickly forward, quartering across the slope toward the sanatorium entrance. Sanatorium staff were running forward across the grass.

"I have to go," Domino said. "I can feel it again."

"Yes. Listen — it's best to always question yourself. Do you understand the reasons for that?"

There was no reply from the terminal.

The attendants were close enough so that he was being recognized. They slowed to a walk and frowned at him. He smiled and nodded. "A little surprise visit. I must speak to Doctors Limberg and Cikoumas about some things. Where are they? Is it this way? I'll go there." He moved through them toward the double doors, and through the doors. He passed the place where she'd broken her heel. He pushed down the corridor toward the research wing, his mind automatically following the floor plan he'd been shown with Clementine. "Not a public area?" he was saying to some staff person at his elbow. "But I'm not of the public. I speak to the public. I must see Doctors Limberg and Cikoumas." He came to the long cool pastel hallway among the labs. Limberg and Cikoumas were coming out of adjoining hall doors, staring at him, as the Type Beta rumbled up. "Ah, there!" he said, advancing on them, spreading his arms and putting his hands on their shoulders. "Exactly so!" he exclaimed with pleasure. "Exactly the people I want. We have to talk. Yes. We have to talk." He turned them and propelled them toward

Limberg's door. "Is this your office, Doctor? Can we talk in here? It seems comfortable enough. We need privacy. Thank you, Doctors. Yes." He closed the door behind him, chatty and beaming. "Well, now!" He propped one buttock on the corner of Limberg's desk. The two of them were standing in the middle of the floor, looking at him. He was counting in his head. He estimated about thirty minutes since Norwood's conversation with Gately. "Well, here we three are!" he said, resting his hands on his thighs and leaning toward them attentively. "Yes. Let's talk."

XII

Limberg put his head back and looked at him warily, his lips pursing. Then his mouth twitched into a flat little grimace. He turned and dropped into one of the two very comfortable-looking stuffed chairs. Against the raspberry-colored velour, he seemed very white in his crisp smock and his old skin and hair. He brought his knees together and sat with his hands lying atop them. He cocked his head and said nothing. His eyes darted sideward toward Cikoumas, who was just at the point of drawing himself up rigid and thrusting his hands into his pockets. Cikoumas said: "Mister — ah — Michaelmas —"

"Larry. Please; this isn't a

formal interview."

"— this is no sort of interview at all," Cikoumas said, his composure beginning to return. "You are not welcome here; you are not —"

Michaelmas raised an eyebrow and looked toward Limberg. "I am not? Let me understand this, now.... Medlimb Associates is refusing me hospitality before it even knows the subject I propose, and is throwing me out the door summarily?" He moved his hand down to touch the comm unit hanging at his side.

Limberg sighed softly. "No, that would be an incorrect impression." He shook his head slightly. "Doctor Cikoumas fully understands the value of good media relations." He glanced at Cikoumas. "Calm yourself, Kristiades, I suggest to you," he went on in the same judicious voice. "But, Mr. Michaelmas, I do not find your behavior unexceptionable. Surely there is such a thing as calling for an appointment?"

Michaelmas looked around him at the office with its rubbed shelves of books, its tapestries and gauzy curtains, its Bokhara carpet and a broad window gazing imperviously out upon the slopes and crags of a colder, harsher place. "Am I interrupting something?" he asked. "It seems so serene here." How much longer can it take to run? he was asking himself, and at the same time he was looking at Cikoumas

and judging the shape of that mouth, the dexterity of those hands which quivered with ambition. "It's only a few questions, Kiki," he said. "That's what they call you, isn't it — Kiki?"

Cikoumas suddenly cawed a harsh, brief laugh. "No, Mr. Michaelmas, *they* don't call me Kiki," he said knowingly. "Is that what you're here to ask?"

"Would he have found some way to beg a lift on a military aircraft," Limberg commented, "if that was the gravity of his errand?"

It didn't seem Cikoumas had thought that through. He frowned at Michaelmas now in a different way, and held himself more tensely.

Michaelmas traced a meaningless pattern on the rug with his shoe-tip. He flicked a little dust from his trouserleg, extending his wristwatch clear of his cuff. "A great many people owe me favors," he said. "It's only fair to collect, once in a while."

There was a chime in the air. "Dr. Limberg," a secretarial voice said. "You have an urgent telephone call." Michaelmas looked around with a pleasant, distracted smile.

"I cannot take it now, Liselotte," Limberg said. "Ask them to call later."

"It may be from Africa," Michaelmas said.

Cikoumas blinked. "I'll see if

they'll speak to me. I'll take it in my office." He slipped at once through the connecting door at the opposite side of Limberg's desk. Michaelmas traded glances with Limberg, who was motionless. "Liselotte," Limberg said, "is it from Africa?"

"Yes, *Herr Doktor*. Colonel Norwood. I am giving the call to Doctor Cikoumas now."

"Thank you." Limberg looked closely at Michaelmas. "What has happened?" he asked carefully.

Michaelmas stood up and strolled across the room toward the window. He lifted the curtain sideward and looked out. "He'll be giving Cikoumas the results of the engineering analysis on the false telemetry sender," he said idly. He scratched his head over his left ear. He swept the curtain off to the side and turned with the full afternoon light behind him. He leaned his shoulders against the cool plate glass. Limberg was twisted around in his chair, leaning to look back at him. "I had heard you were an excellent investigative reporter," he said.

"I'd like to think I fill my role in life as successfully as you have yours."

Limberg frowned faintly. A silence came over both of them. Limberg turned away for a moment, avoiding the light upon his eyes. Then he opened his mouth to speak, beginning to turn back,

and Michaelmas said: "We should wait for Cikoumas. It will save repeating."

Limberg nodded slowly, faced forward again, and nodded to himself again.

Cikoumas came back after a few moments. He peered at Michaelmas up the length of the room. Behind him there was a glimpse of white angular objects, a gleam of burnished metals, cool, even lighting, a pastel blue composition tile floor. Then he closed the door. "There you are." He progressed to a show of indignation. "I have something confidential to discuss with Doctor Limberg."

"Yes," Michaelmas said. "About the telemetry sender."

Limberg turned now. "Ah." He raised a hand sideward. "Hush one moment, Kristiades. Mr. Michaelmas, can you tell us something about the sender?"

Michaelmas smiled at Cikoumas. "Norwood says it's probably from Viola Hanrassy's organization."

Cikoumas and Limberg found themselves trying to exchange swift glances. Limberg finally said: "Mr. Michaelmas, why would they think it's from Hanrassy?"

"When it isn't? Are you asking how has UNAC fooled Norwood?"

Cikoumas twitched a corner of his mouth. "To do that, as you may

not realize, they would have to reprogram their laboratory equipment. Events have been too quick for them to do that."

"Ah. Well, then, are you asking why has Norwood become a liar, when he left here so sincere?"

Limberg shook his head patiently. "He is too fine a man for that." His eyes glittered briefly. "Please, Mr. Michaelmas. Explain for me." He waved silence toward Cikoumas again. "I am old. And busy."

"Yes." Not as busy as some. "Well, now, as to why the sender appears a fake, when we all know it should appear genuine...." He rubbed his knuckles gently in his palm. "Sincere. If it could talk; if there was a way you could ask it Did He who made the lamb make Thee, it would in perfect honesty say *Da*." And how does it do that, I wonder. Or how did they convince it? Which is it? What's that noise beyond Cikoumas's door? "Then if you see the impossible occurring, Doctors, I would say perhaps there might be forces on this Earth which you had no way of taking into account." He addressed himself directly to Limberg. "It's not your fault, you see?"

Limberg nodded. The flesh around his mouth folded like paper.

Cikoumas dropped his jaw. "How much *do* you know?"

Michaelmas smiled and spread his palms. "I know there's a sincere Walter Norwood, where once over the Mediterranean there was nothing. Nothing," he said. "He'll be all right; nice job in the space program, somewhere. Administrative. Off flight status; too many ifs. Grow older. Cycle out, in time. Maybe get a job doing science commentary for some network." Michaelmas straightened his shoulders and stood away from the window. "It's all come apart, and you can't repeat it, you can't patch it up. Your pawns are taken. The Outer Planets expedition will go, on schedule, and others will follow it." And this new sound, now.

It was a faint ripple of pure tones, followed by a mechanical friction as something shifted, clicked, and sang in one high note before quieting. Cikoumas had taken longer in there than he might have needed for a phone call.

Limberg said: "Mr. Michaelmas — these unknown forces... you are in some way representative of them?"

"Yes," Michaelmas said, stepping forward. "I am they." His mouth stretched flat and the white ridges of his teeth showed. The sharp breath whistled through them as he exhaled the word. "Yes." He walked toward Cikoumas. "And I think it's time you told your masters that I am at their

gates." As if I were deaf and they were blind. He stopped one step short of Cikoumas, his face upturned to look directly at the man. There's something in there. In his eyes. And in that room.

Cikoumas smiled coldly. That came more naturally to him than the attempts to act indecision or fear. "The opportunity is yours, Mr. Michaelmas," he said, bowing from the waist a little and turning to open the door. "Please follow me. I must be present to operate the equipment at the interview."

"Kristiades," Limberg said softly from his chair, "be wary of him."

There was no one beyond the door when Michaelmas followed Cikoumas through it.

It was a white and metal room of moderate size, its exterior wall panelled from floor to ceiling with semi-globular plastic bays, some translucent and others transparent, so that the mountains were repeated in fish-eye views among apparent circles of milky light. Overhead was the latest in laboratory light technique; a pearl-colored fog that left no shadows and no prominences. The walls were in matte white; closed panels covered storage. The composition underfoot was very slightly yielding.

To one side there was a free-standing white cylindrical cabinet,

two and a half meters tall, nearly a meter wide. The faintest seams ran vertically and horizontally across its softly reflective surface. It jutted solidly up from the floor, as though it might be a continuation of something below.

Ahead of Michaelmas were storage cubes, work surfaces, instrumentation panels, sterile racks of teasing needles, forceps and scalpels, microtomes, a bank of micromanipulative devices; all shrouded beneath transparent flexible dust hoods or safe behind glassy panels.

Michaelmas looked around further. At his other hand was the partition wall to Limberg's office. From chest height onward, it was divided into small white open compartments like dovecotes. Below that was a bare workshelf and a tall, pale-blue-upholstered laboratory stool to sit on. Cikoumas motioned toward it. "Please."

Michaelmas raised his eyebrows. "Are we waiting here to meet someone?"

Cikoumas produced his short laugh. "It cannot come in here. It doesn't know where we are. Even if it did, it couldn't exist unprotected here." He gestured to the chair again. "Please." He reached into one of the pigeonholes and produced a pair of headphones at the end of a spiral cord. "I do not like the risk of having this voice over-

heard," he said. "Listen." He cupped one earpiece in each hand and moved toward Michaelmas. "You want to know?" he said, twisting his mouth. "Here is knowledge. See what you make of it."

Michaelmas grunted. "And what would you like to know?"

Cikoumas shrugged. "Enough to decide whether we must surrender to these forces of yours or can safely dispose of you, of course."

Michaelmas chuckled once. "Fair enough," he said, and sat down. His eyes glittered hard as he watched Cikoumas's hands approach his skull. "Lower away."

Cikoumas rested the headphones lightly over Michaelmas's ears. Then he reached up and pulled out another set for himself. He stood close by, his hands holding each other, bending his body forward a little as if to hear better.

The voice was faint, though strong enough, probably, at its origins, but filtered, attenuated, distant, hollow, cold, dank: "Michaelmass..." it said. "Is that you? Cikoumas tells me that is you. Isss that what you are — Michaelmass?"

Michaelmas grimaced and rubbed the back of his neck. "How do I answer it?" he asked Cikoumas, who momentarily lifted an earpiece.

"Speak," Cikoumas said, shifting eagerly around him. "You are heard."

"This is Michaelmas."

"An entity... you consider yourself an intelligent entity."

"Yes."

"Distinguishable in some manner from Limberg and Cikoumasss...."

"Yes."

"What does A equal?"

"Pi R squared."

"What is the highest color of rainbows...."

"Red."

"Would you eat one of your limbs if you were starving?"

"Yes."

"Would you eat Cikoumas or Limberg if you were starving?"

Cikoumas was grinning faintly at him.

"First," Michaelmas said coldly.

"An entity... to speak to an intelligent entity... in these circumstances of remoteness and displacement... you have no idea how it feels... to have established contact with three entities, now, under these peculiar circumstances... to take converse with information processors totally foreign... never of one's accustomed bone and blood...."

"I — ah — have some idea."

"You argue?"

"I propose."

"Marriage?"

"No. Another form of dialectical antagonism."

"Ah-hah! Ah-hah! Ah-hah! Then is your curiosity in the name of what you think science...?"

"Justice."

"Ah-hah! Ah-hah! Complex motivations...! Ah-hah! The academician Zusyskses sssaid to me this would be so; he said the concept is not of existences less than ours, but apart from oursss in origin only, reflecting perfectly that quality which we define as the high faculties; I am excited by your replies.... I shall tell my friend, Zusyskses, when we reunite with each other this afternoon; his essential worth is validated!"

"I might be lying."

"We know nothing of lies.... No, no, no... in the universe, there is this and there is that. This is not that. To say this is that is to hold up to ridicule the universe. And that is an absurd proposition."

"What is it, then, that isn't the truth but isn't a lie?"

Cikoumas looked at him with sudden intensity. But Michaelmas was nearly blind with concentration.

"Shrewd... you are a shrewd questioner... you speak of probability... yesss... it was my darling Zusyskses who proposed the probability models of entities like you; who declared this structure was possible, and sssso must exist

somewhere because the universe is infinite, and in infinity all things must occur. And yet this is only a philosophical concept, I said in rebuttal. But let me demonstrate, said my preceptor, Zusykses, in ardor to me; here, subordinate academician Fermierla, take here this probability coherence device constructed in accordance with my postulates... while away this noon and sseek such creaturesss as I say must be, for you shall surely find their substance somewhere flung within Creation's broadly scattered arms; take them up, meld of their varied strains that semblance which can speak and touch in simulacrum of a trueborn soul; regard then visage, form and even claim of self. Return to me, convinced — we tremble at the brink of learning all that life is. Clasp to yourself my thought made manifest, which is my self; Know it, accept it, make it one with us; I shall not ssend you from me anymore...."

Michaelmas looked at Cikoumas, frowning. He lifted off the headphones but held them near his ears. Fermierla's voice continued faintly.

"He thinks he's communicating with a demonstration model," Cikoumas said dryly. "Something created by this probability coherer of theirs. It isn't likely to them that this is the human world. It's liklier that accidental concentrations of

matter are moving and combining in such a manner that, by pure chance, they perfectly match infinitesimal portions of Zusykses' concept. Zusykses and Fermierla think the coherer detects and tunes an infinitely large number of these infinitely small concentrations together into an intelligible appearance. They think we might actually be anything — a sort of Brownian movement in the fabric of the universe — but that entirely at random in an infinity of chances, these selected particles invariably act to present the appearance of intelligent creatures in a coherent physical system."

"Just one?" Michaelmas asked sharply.

Cikoumas's head twitched on its long, thin neck. "Eh?"

"You're talking as if ours is the only probability Fermierla can reach with the coherer. But why should that be? He has his choice of an infinity of accidentally replicated pseudohuman environments, complete with all our rocks and trees and Boy Scout knives. It's all infinite, isn't it? Everything has to happen, and nearly everything has to happen, and everything twice removed, and thrice, and so forth?"

Cikoumas licked his lips. "Oh. Yes. I suppose so. It seems a difficult concept. I must be quite anthropomorphic. And yet I suppose at this moment an infinite

number of near-Fermierlas are saying an infinitely varied number of things to an infinity of us. A charming conceit. Do you know they also have absolutely no interest in where we actually are in relation to each other? Of course, they don't think we actually do exist." Cikoumas shrugged. "All Fermierla cares about in his so-called affinity for the researcher personality type. He thinks of Doctor Limberg as his counterpart. He is titillated by that." The grin was acid. "Incidentally, it has been the same mid-day for Fermierla since before Doctor Limberg was my age. So there are massive displacements; the gravitic, temporal and electronic resistances involved must be enormous."

"The what?"

"The resistances." Cikoumas gestured impatiently. "The universe is relativistic — You've heard that, surely? — and although, as a life scientist, I am not concerned with all the little details of Non-Newtonian physics, I read as much as I have time for —"

"Good enough, Doctor," Michaelmas said. "There's no point attempting to match your breadth of knowledge and my capacity just now." He put the headphones back over his ears. The skin of his forearms chafed against his shirtsleeves in ten thousand places. Out of the corner of his eye, he saw Cikoumas

moving casually and reaching up to another pigeonhole.

"...fascinating possibilities... to actually collaborate in experiments with you... entities. Zussykses will be beside himself! How fares the astronaut; is it still viable? How does it act? Does it display some sign it is aware it has been tuned from one probability to another... to reality, pardon."

"He's well enough," Michaelmas replied.

"It was a waste," Cikoumas said distractedly. He was manipulating some new control up there, both hands hidden to the wrists while he turned his head to look over Michaelmas's shoulder. But he was trying to watch Michaelmas at the same time.

"Ah, thatsss a shame! You had such hopes for it a little while ago, Cikoumas! Perhaps then we should be obtaining the second Michaelmas from not that same probability... what's your opinion, gentlemen?"

Michaelmas was on his feet, facing Cikoumas, the flexcord stretching nearly to its limit as he turned. Something had begun to whine and sing behind him. Cikoumas stared into his eyes, in the act of pulling one hand away from the wall, the custom-checkered walnut grip of a pistol showing at the bulge of reddish-white palm and bony thumb. Michaelmas tore off the

headphones and threw them at him. The strap for Domino's terminal, hung over his left shoulder, dropped across his forearm, twisted, and caught firmly there below his elbow. Spinning, the angular black box whipped forward and cracked into Cikoumas's thin head. He averted his face sharply and went flailing down backward, striking loudly against the floor and the angle of the wall. He lay forever motionless, flung wide.

Michaelmas moved like lightning to the wall. He jumped up to see what Cikoumas had been working. There were incomprehensible knobs and switches in there. He jumped again and snatched the pistol from its cubby. Working at it with both hands, he found the thumb-off for the energizer and the location of the trigger switch. He crouched and faced the white column. Its seams were widening. He stretched out his arms, pointing the pistol. His face convulsed. He turned instead and scrambled to his knees atop the stool, thrust the barrel up above eye level into the control cubby, and fired repeatedly. Clouds of acrid odor poured back into the room. Flame rioted among the sooty shadows, sputtered, and died down. He turned back, half-toppling, and kicked the stool aside. The portals were no wider; not much more visible, really, than

they had been. The singing had gone with the first shot. Now there was something beginning to bang in there; erratic and disoriented at first, but settling down to a hard rhythmic hammering, like a fist.

Limberg was standing in the doorway, looking. "Send it," Michaelmas said hoarsely, wide-eyed, gesturing, "send it back."

Limberg nodded listlessly and walked slowly to the controls. He looked at them, shook his head, and fumbled in his pockets for a key ring. "I shall have to use the master switches," he said. He went to the opposite wall and unlocked a panel. Michaelmas moved to the center of the floor, holding the pistol and panting. Limberg looked back at him and twitched his mouth. He opened the wall and ran a finger hesitantly along a row of blank circles. He shrugged, finally, and touched two. They and most of the others sprang into green life. One group went red-to-orange-to-yellow, flickering.

"Hurry," Michaelmas said, taking a deep breath.

"I'm not expert in this," Limberg said. He found an alternate subsection by running a forefinger along until he appeared reasonably confident. He pushed hard with all the fingers of his hand, and the cylindrical white cabinet began to sing again. Michaelmas's hands jerked. But

seams were closing; soon they could hardly be seen. The whining came, and then diminished into nothing. The beating and kicking sounds stopped. Michaelmas wiped the back of his hand across his upper lip. "He had me in contact with it long enough, didn't he?" he said. "It was faster than it must have been with Norwood."

"Yes," Limberg said. "Norwood had to be individualized for Fermierla with many, many bits from television documentary recordings. There were many approximations not close enough. Many rejects. In your case, it was possible to present you as a physical model of what was wanted." He began to close the panel. "Is there anything else?"

"Leave it open, Doctor." Michaelmas frowned and cleared his throat. "Leave it open," he tried again, and was better satisfied. He went back to where his headphones still hung from the wall, and started to lift them. He looked at the pistol in his hand, safetied it, and tossed it into the nearest cubby. He slipped the headphones over his ears. There was almost nothing to hear: "...sss...err...masss...." and it was very faint. He put one fist around the cord and pulled the jack out, removed the headphones, and laid them gently on the workshelf. He turned to Limberg: "Shut it down. Everything on your end; all

the stuff Cikoumas has wired in over the years."

Limberg looked at him overwhelmed. But he saw something in Michaelmas's face and nodded. He ran his hands over the controls and all of them went steady red. He bowed his head.

"I'm in. I'm here," Domino said. "I've got their household systems. Where's the rest?"

"Wait," Michaelmas said. Limberg had left the panel and gone over to where Cikoumas lay. He sat down on the floor beside him and with his fingers began combing the lank hair forward over the wound. He looked up at Michaelmas. "He was attempting to protect humanity," he said. "He couldn't let the astronauts reach Jupiter."

Michaelmas looked back at him. "Why not?"

"That's where the creatures must be. It is the largest, heaviest body in the solar system, with unimaginable pressures and great electrical potentials. It is a source of radio signals, as everyone knows. Kristiades discussed it with me increasingly after he saw your broadcasts with the Soviet astronaut. 'Such a man will find the race of Zusykses,' he said. 'It will be a disaster for us.' And he was right. We are safe only as long as they think we are not real. We must remain hidden among all the accidental systems."

"Yes," Michaelmas said. "Of course."

"He was a brilliant genius!" Limberg declared. "Far worthier than I!"

"He sold out his father and his sons for a striped suit."

"What will I tell his family?"

"What did you tell them when you said you'd send the grocer's boy to Paris?"

Limberg's upper body rocked back and forth. His eyes closed. "What shall I do with his body?"

"What was he going to do with mine?" Michaelmas began to say. Looking at Limberg, he said instead: "Your systems are being monitored now, and you mustn't touch them. But a little later today, I'll call you, and you can begin to reactivate them step by step under my direction."

"Right," Domino said.

"When you've re-established contact with Fermierla, you can shift out this Cikoumas and shift in —"

Limberg's creased cheeks began to run with silent tears.

"For his family," Michaelmas said. "For their sake, make him easier to get along with, this time."

Limberg stared. "I would not in any case have it want to be here with me. I will send him home." He said: "I felt when first you began here with us that you were a messenger of death."

"Domino," Michaelmas said, "get me a cab." He pushed through the door and out into the hall, then along that and past the auditorium, where convalescent ladies and gentlemen were just chattily emerging and discussing the psychically energizing lecture of the therapy professor, and then out through the double doors and waited outside.

XIII

He said little to Domino on the ride to the airport, and less on the flight back to New York City. He made sure the Papashvilly interview was going well; otherwise, he initiated nothing, and sat with his chin in his hand, staring at God knew what. From time to time, his eyes would attempt to close, but other reflexes and functions in his system would jerk them open again.

From time to time, Domino fed him tid-bits in an attempt to pique his interest:

"Hanrassy has reneged on her promise to grant EVM an interview." And, a little later:

"Westrum's speaking to Hanrassy. Should I patch you in?"

"No. Not unless she takes charge of the conversation."

"She's not."

"That's good enough, then." He thought of that tough, clever woman on the banks of the Mississippi, putting down her phone and

trying to reason out what had happened. She'd alibi to herself eventually — everyone did. She'd decide Norwood and Gately and Westrum were conspiring, somehow, and she'd waste energy trying to find the handle to that. She'd campaign, but she'd be a little off balance. And if it seemed they might still need to play it, there was always the ace in the hole with the income tax official. And that was the end of her. Somewhere among her followers, or in her constituency, was the next person who'd try combining populism with xenophobia. It was a surefire formula that had never in the entire history of American democracy been a winner in the end.

They come and they go, he thought. He rubbed the skin on the backs of his hands, which seemed drier than last year and more ready to fold into diamond-shaped, choppy wrinkles, as if he were a lake with a breeze passing across it.

The EVM crew staked out in Gately's anteroom finally found him consenting to receive them:

"I'd like to take this opportunity to announce to the world," Gately said, "that we are to have the honor, the privilege and the great personal gratification to welcome Colonel Norwood to these shores on his impending visit." He had changed out of his sweatsuit and was wearing a conservatively

cut blue vested pinstripe that set off his waistline when he casually unbuttoned his jacket. He looked almost young enough to go back on active status himself, but his eyes were a little too careful to follow every movement of every member of the interview crew.

Time passed. President Fefre had a mild attack interpreted as indigestion. A man in Paris attempted to leave a flight bag of explosives in the upper elevator of the Eiffel Tower, but police alerted by a fortuitous tap into a political telephone conversation arrested him promptly. Another man, in Barcelona, was found to have embezzled a huge amount of money from the funds of the provincial lottery. He was the brother of the provincial governor; it seemed likely that there would be heightened public disillusion in that quarter of the nation. Madrid, which had been a little dilatory in its supervision, would have to be a bit more alert for some time, so who was to say there was not some good in almost anything? And most of the money was recovered. Also, a small private company in New Mexico, composed of former engineering employees striking out on their own, applied for a patent on an engine featuring half the energy consumption of anything with comparable output. The president of the company and his chief engi-

neer had originally met while coincidentally booked into adjoining seats on an intercity train. Meanwhile, a hitherto insignificant individual in Hamburg ran his mother-in-law through the eye with a fork at his dinner table, knocked down his wife, went to the waterfront, attempted clumsily to burn his father-in-law's warehouse, and professed honestly to have lost all memory of any of these preceding events when he was found sitting against a bollard and crying with the hoarse persistence of a baby while staring out over the water. But not all of this was reported to Michaelmas immediately.

"All right, then," Domino said, "if you don't want to listen, will you talk? What happened at the sanatorium? Limberg's keeping everybody out of the room with Cikoumas's body, seeing no one, sitting in his office, and obviously waiting for someone to tell him what to do next."

Michaelmas grunted. He said: "Well, they were laboratory curiosities and the person in charge of them is sentimental and intrigued. When they proposed something ingenious, such as moving something coherent from one arbitrary frame of reference into a highly similar frame, they were indulged. Why not? The experiment may be trivial, or it may be taken as proof that there are no orders of greater

or lesser likelihood among sets, but in either case it was suggested by a member of the experiment. You have to admit that would intrigue almost anyone, let alone a poet in heat." Michaelmas smiled as though something had struck his mouth like a riding whip. "Poke around, now that you're inside Limberg's system. Open one part of the circuitry at a time. You'll meet what's been chasing you. Be careful to keep a firm hold on the switching."

There was a pause. Then the machine was back. "It... it seems we here are considered an effect." Domino paused again.

"We are an effect," Michaelmas said. "They have a means of scanning infinity. When they want a model of an elephant, they tune out everything that doesn't look like an elephant. When they deduce there's a human race, they get a human race. Warts and all. The difference between the model of the elephant and the human race is that the representatives of that race can speak; they can request, and they can propose. They can even believe they think they represent *the* human race. But in all of infinity, the chances are infinite that they are only drifting particles."

He said nothing more for a long time, blinking like an owl in the bright mid-afternoon sunshine of

Long Island, looking a little surprised when his bag was put aboard his cab for him.

In the apartment, he sat at the desk, he brooded out the window. Finally he began to be able to speak, and spoke to Domino in a slow, careful voice, pausing to marshal his facts, and to weigh them in accord with their importance to the narrative.

"So that was it?" Domino asked. "Mere scientific curiosity? This Fermierla contacted Limberg at some point in the past — Well, why not? They must have been very much alike, at one time; yes, I can see the sense in that — and then Limberg began to see ways in which this could be useful, but it was after he brought in Cikoumas that the enterprise began to accelerate. Fermierla still thinking it was in touch with fantasy creatures —"

"Not in touch. Not... in touch."

"In contact with. And Medlimb prospered. But Cikoumas became worried; suppose UNAC found Fermierla? Suppose Doktor Limberg was exposed to the world for what he was, and Cikoumas with him. But that's all unrealistic. Fermierla's no more on Jupiter than I am. These biological people are all scientific illiterates; rife with superstition. You tell them radio signals, and they think WBZ. They have no idea of the scale of what's involved here. They —"

"Yes, yes," Michaelmas said. "Take over Limberg, will you? Manage the rest of his life for him. Meanwhile, there's one more thing I have to do before I can end this day."

"Yes, I suppose," Domino said, and put in a call to Clementine Gervaise, who was in Paris. Michaelmas squeezed his hands and punched up full holo; she sat at a desk within a few feet of him, a pair of eyeglasses pushed up into her hair, her lipstick half worn off her lower lip, and a hand-editing machine beside the desk.

"Laurent," she said, "it is good to have you call, but you catch me at a devil of a time," she smiled suddenly. "Nevertheless, it is good to have you call." The smile was fleetingly very young. "From New York." Now she appeared a little downcast. "You departed from Europe very quickly."

"I didn't expect you in Paris. I thought you'd still be in Africa."

She shook her head. "We have a problem," she said. She turned to the editor, flicked fingers over the keyboard with offhand dexterity, and gestured: "See there."

A sequence aboard the UNAC executive plane came up. Norwood was smiling and talking. The point of view changed to a reverse angle closeup of Joe Campion asking a question. As he spoke, his forehead suddenly swelled, then returned to

normal, but his eyes lengthened and became slits while the bridge of his nose seemed to valley into his skull. Next his mouth enlarged, and his chin shrank. Finally the ripple passed down out of sight, but another began at the top of his head, while he spoke on obliviously.

"We can't get it out," Clementine said. "It happens in every shot of Campion. We've checked the computer, we've checked our mixers." She shrugged. "I suppose someone will say we should check this editor, too, now. But we are either going to have to scrap the entire program or substitute another interviewer."

"Can't you get hold of Campion and re-shoot him?"

She made an embarrassed little face. "I think he is overdrawn at his bank, or something of that sort. He cannot get validation for an airplane seat. Not even his telephone works," she said. She blushed slightly. "I am in a little trouble for recommending that sort of person."

"Oh, come, Clementine, you're not seriously worried about that. Not with your talent. However, that is amazing about Campion. He seems to be having a run of bad luck."

"Well, this isn't why you called me," she said. She waved a hand in dismissal behind her. "Either that works or it doesn't; tomorrow

comes anyway. You're right." She rested her elbows on her desktop and cupped her face in her hands, looking directly at him: "Tell me — what is it you wish with me?"

"Well, I just wanted to see how you were," he said slowly. "I rushed off suddenly, and —"

"Ah, it's the business. Whatever you went for, I suppose you got it. And I suppose the rest of us will hear about it on the news."

"Not — not this time, I'm afraid."

"Then it was personal."

"I suppose." He was having trouble. "I just wanted to say 'Hello.'"

She smiled. "And I would like to say it to you. When are you next in Europe?"

He took a breath. It was hard to do. He shrugged. "Who knows?" He found himself beginning to tremble.

"I shall be making periodic trips to North America very soon, I think. I could even request doing coverage of Norwood's U.S. tour. It starts in a few days. It's only an overnight wonder, but if we move it quickly, there will still be interest." She cocked an eyebrow. "Eh? What do you think? We could be together in a matter of days."

He thrust back convulsively in his chair. "I — ah — call me," he managed. "Call me when it's definite. If I can...." He squirmed. She

began to frown and to tilt her head the slightest bit to one side, as if gazing through a shop window at a hat that had seemed more cunning from a little farther away. "...If I'm here," he was saying, he realized.

"Yes, Laurent," she said sadly. "We must keep in touch."

In the night for many years, he would from time to time say the word 'touch' distinctly, without preamble, and thrust up his arms toward his head, but this was not reported to him.

"*Au'voir.*"

"*Au revoir, Clementine.*" He ended the call, and sat for a while.

"Well," Domino said, "now you know how you feel."

Michaelmas nodded. "She may readily have been given only conventional treatment at the sanatorium. But, yes, now we know how I feel."

"I could check the records."

"Like you checked their inventories."

"Now that I'm situated in their covert hardware, I'm quite confident I can assimilate any tricks in

their soft mechanisms. I can run a real check."

"Yes," Michaelmas said sadly. "Run a real check on infinity."

"Well...."

"Life's too short," Michaelmas said.

"Yours?"

"No." Michaelmas stretched painfully, feeling the knotted muscles and grimacing at the swollen taste of his tongue. He worked the bed and began undressing. Somewhere out beyond his windows, a helicopter buffeted by on some emergency errand. He shook his head and closed his eyes momentarily. He opened them long enough to pull back the coverlet. "No calls," he said, darkening the windows. "Not for eight hours; longer if possible." He lay down, pulling the cover up over the hunch of his shoulder, putting his left hand on his right wrist and his right hand under his cheek. He settled himself. "It's one fortunate feature of this occupation," he remarked in a voice that trailed away. "I never seem to have any trouble sleeping."



BLOOD DOESN'T GO "ARF!"

Dogs, who have always figured in the history of man as his best familiar and most empathetic alien, have been dealt with often in science fiction (Stapledon's *Sirius*, Simak's *City*), and Harlan Ellison's Nebula Award-winning novella "A Boy and His Dog" is one of contemporary s/f's most popular and widely read excursions into the sub-genre of *Canis superior*.

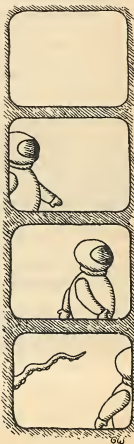
I haven't read "A Boy and His Dog"; about the time that I might have, there was already talk of a film, and I feel strongly that knowledge of the literary source of a movie can often be detrimental to one's reaction to that movie. So there will be no comparison here.

I am aware that most readers will have seen it long ago, but it has been withheld for release in the New York area for one or several of those mysterious reasons that govern film distribution (a major one is that NYC has the reputation of being a very tough town for movies, which means that it is often bypassed by iffy productions; the Doc Savage film, for instance, never opened here, so far as I know).

Back to "A Boy and His Dog"... The time is post World War II and IV; the setting could be almost

BAIRD SEARLES

Films



anywhere-USA, but is probably Southern California (where else?). Vic (Don Johnson) is a lone wolf with ragged fatigues, a rifle, a pistol, ammunition, and Blood, a full size poodle of indeterminate age and acerbic demeanor. The desert, occasionally cluttered with rusting relics of a now obsolete technology, is occupied by both settled and roving bands of derelicts. Vic and Blood enter one of the settlements and go to the movies, which consist of archaic, pre-lib porno films viewed by apathetic audiences; it's the only entertainment there is.

Vic is desperate for a lay and asks that Blood use his finely honed doggy senses to sniff one out for him. Blood does, and Vic follows the girl into a wrecked underground chamber, hot for rape. The girl, Quilla Jean, likes the idea and all is well enough until a group of uncouth-type raiders appears. There is a nasty fight, the valiant Blood is injured, the raiders not dispatched by Vic are scared off by the incorporeal "screamers" (unseen and unexplained presences that make a lot of noise), and Quilla Jean splits. With the now three-legged Blood's help Vic tracks the girl to the entrance to the underground, where an organized remnant of society has established a world of apple pie and Mom. Vic leaves a forlorn but still wise-crack-

ing Blood to wait above.

Descending through layers of turbines, catwalks, monster pipes and singing machines (they must have shot this section in the workings of Hoover Dam), Vic enters this Norman Rockwell milieu where the grass is green and the foliage verdant (how do you do this without photosynthesis?) and the sky is blue (sky? Don't ask me!).

Adventures and follies ensue and Vic generally comes up short; without Blood his powers are considerably reduced. Vic and Quilla Jean escape and return to the surface together, presumably to make their way ensemble.

Blood, near death from his wounds and starvation, lies pathetically on the scorched sand. Nobly he tells Vic that he's just about done for and Vic and Quilla Jean (about whom Blood has been less than kind) should go over the hill to a better life. Vic is torn, and hungry, too. Either way Quilla Jean represents salvation, and, making a reasonable choice, Vic kills and cooks her. Need I say that Vic and Blood go off into the sunset together?

Those many readers who like Ellison's work will probably like the movie; it has that sense of contemporary satirical allegory which his admirers find meaningful and hip, his detractors pretentious fantasy with s/f trappings.

On the plus side, production values are modest and perfectly suited to the story. Even more on the plus side is *Blood*; it is the dog's movie (what classic movie star was it who swore never to share a scene with an animal, who will steal it every time?). It seems a pity that the dog-man dialogue was conceived in human language, a device that is given no explanation and which, for me, just didn't quite come off — it may well have worked better in the less specific medium of print.

Don Johnson does a downright embarrassing James Dean imitation: tough, diffident, aw-shucks, vulnerable, it's Dean's whole persona, right but still derivative. The film's jokes are sophomoric, pandering to the scatological, and the attitude toward sex has that flip, *au courant* quality that is a direct descendent of adolescent snickers (sex ain't nothing but smut misspelled?).

The film has its moments, but they are few and far between; for the s/f oriented, "A Boy and His

Dog" will ring much too familiar, treading well worn and over trod ground. In sum, only the wondrous presence of *Blood* enlivens and keeps the film from being totally pedestrian. Still and all, somewhere here probably lurks a wavering E for effort (and certainly a D for dog).

Things-to-come-department...

Just as a relief from the upcoming tidal wave of s/f films, we might mention that that Ray Russell's *Incubus*, about a supernatural rapist (?), is to be filmed. And the long-in-the-works animated version of *The Hobbit* will be a TV special sponsored by Xerox at an unspecified future date.

Literary-department...

Two oversize paperbacks on classic fantasy films have appeared: *The Girl in the Hairy Paw* (Avon) is an exhaustive study of King Kong and his legend, including a lengthy chapter on his penis; and *Down the Yellow Brick Road* (Pyramid) is, of course, about the filming of *The Wizard of Oz*.



An amusing tale about the invention we've all been waiting for (that is, those of us who drive cars). Curt Siodmak is a screenwriter and novelist who is probably best known for the famous Donovan's Brain.

The P Factor

by CURT SIODMAK

"You with your permissiveness," Vera said, "you're turning Junior into a freak."

James Junior was their only son. Eight years old, he looked as if he had been shrunk into a diminutive man by a witch's wand.

"What did he do now?" Jim Senior asked from behind his typewriter where he put formulas on paper, writing a textbook on chemistry.

"Don't you smell it?" Vera asked. She was a tall, mod woman in her late twenties, her hair cropped short in protest to Jim's and Junior's, who wore their hair long.

"You fixed up the chemistry set for him. And you know what he does with it?"

"He does what he likes with it," Jim says patiently. He suspected Vera to be jealous of Junior, a male who suddenly had come between them in their marriage.

"He certainly does," Vera said, playing the ace of spades. "He pees in this old canning jar, that little pig, and uses his pee for experiments."

"Only boys can do that," Jim muttered. "That's why women will never succeed with their lib movement. That obstacle they'll never be able to overcome."

"He pours that stuff in a glass and cooks it over the Bunsen burner. I don't know what chemical he adds to it. He's going to set the house on fire."

"I will never stymie his curiosity," Jim said and remembered that the fire insurance was due.

"He pours that concoction into the gas tank of his airplane motor. Just look out the window and you can see that he uses that vile stink to fly his model plane."

"He does what?" Jim asked, startled.

As though Junior were answer-

ing him, Jim saw the replica of the Bonanza racing past the window, circling higher and higher out of sight.

"Don't tell me he flies the plane on pee!"

"If you wouldn't have that chronic sinus trouble, you'd be able to do your own smelling. Tell him to stop using his body liquids in his chemical concoctions. It is disgusting!"

Jim quickly passed her, his freckled face with the pale-blue eyes expressing disbelief and wonder.

"Don't hit him," Vera said worriedly.

"The hell I will," Jim muttered, his computer-trained mind reeling.

"Come over here, right now," he called Junior, his voice sharper than he intended.

Morosely Junior reeled in the Bonanza and cut the motor.

"What's it now?" he asked defiantly.

"I told you not to use that plane between the trees. That toy set me back a hundred dollars. Did you steal my lighter fluid?"

Junior's wizened face contorted into a sneer.

"I didn't use your damn lighter fluid. It would gum up the motor."

They used coarse language between them, secret words which should never be used outside the house or within earshot of his

mother.

"Then where did you get the gas to fly the plane?" Jim asked, kneeling down to be at eye level with his son.

"I asked you to buy me a pint of Super Ethyl. I told you to take it out of my allowance. But you didn't," Junior said petulantly. "I tried to siphon gas out of your car, but you put that damn lock on it. So I made my own."

"How did you do that?" Jim asked. The boy watched him with suspicion.

"None of your business."

"I don't believe you made high-octane gas yourself," Jim said.

"Who asked you to believe me?" Junior said. "I'm flying my plane any time I want. You gave me the Bonanza for my birthday. It's mine. And I won't buy ethyl gasoline at the hobby shop. Sixty cents a pint! That's highway robbery!"

Besides reading books on mechanics and chemistry, Junior liked to read stories about outlaws.

"Then what did you use?" Jim asked.

Reluctantly Junior took a small bottle from his pocket. "Here, but give it back to me."

Jim took off the screw top. The liquid inside the bottle had a pungent smell and a yellowish color.

"What is it?" he asked.

"You know what and a few

chemicals added," Junior said. "Much cheaper than buying gas. And the supply is unlimited."

"You mean — your pee? You must've a special one."

"I don't have a special one. I bet everybody's works. That mixture must be known to the oil companies. But knowledge in our capitalistic society is held back from the poor," said Junior, who also read the *New Republic*.

"Show me how you did it," Jim said with a forced laugh, hoping Junior would be able to repeat the formula.

"Vera wouldn't like it. She says it stinks."

"Never mind Vera," Jim said. "We always worked together, didn't we? We have our secrets. We don't keep anything from each other."

"I'm not so sure you tell me everything. But I do, since you're bigger and can beat me up," Junior said. "It isn't difficult to make that stuff."

"Let's retire to the lab," Jim said, getting up.

"I found a name for that stuff; first I called it Pee-Ex but I think Gas-Ex is better."

"Gas-Ex sounds more refined. We are going to patent the formula and that name. That is if we can ever find out how you did it."

"No bottleneck," Junior said as they entered his room. It had a low

workbench, the walls were covered with electric switches and a blackboard with technical drawings. On a board stood rows of chemicals in liquid and powdered form.

"Here're the bottles I used, and of course you know what," Junior said.

"Isn't this mother's?" Jim asked, picking up a small bottle of perfume.

"Chanel Number Five. It might improve the smell. You'd better get her another bottle before she finds out."

"Man, you have a knack of getting me into trouble," Jim sighed. He cleaned the blackboard with a sponge. "Now let's see how you did it. What's the formula of pee?"

"Don't be coarse. Call it urea. I looked it up in the chemistry book."

$\text{H}_2\text{N}=\text{C}=\text{NH}_2$, Jim wrote on the board.

"You did your homework," Junior said condescendingly. "I distilled the formula and added ten drops of pure alcohol."

"You made notes, of course," Jim said, awed to see his own image in small, a mind with the perception and imagination with which he prided himself.

"I'm not dumb. I wouldn't do anything without making notes. Suppose that stuff explodes. The fire department would love to know

how I blew myself up," Junior said, measuring chemicals into a phial. "I'm all dried up. How's your bladder? Can you deliver? If you're bashful, I'll turn around."

"Glad to oblige," Jim said. "We better get a few cases of coke. We might need it." He disappeared in the adjoining bathroom. Junior whistled until Jim returned with the completed job.

"I tried to make hydrazine to get myself some rocket fuel," Junior said.

"Don't do that," Jim said worriedly, "or we won't have a roof over our head."

Vera knocked at the door. Her voice rose in pitch. "Why do you lock yourself in? Will you two never grow up? Dinner is ready. Food's getting cold."

"Just a minute," Jim said.

"What are you both doing?" Vera wailed. She resented the intimacy between father and son in which she had no part.

"We're changing the economic structure of the world," Jim called out, watching the distiller drip a yellowish liquid into a container.

"You bet we are," Junior said.

The man in the grey suit, carrying a black briefcase, checked the house number and walked over the lawn while Phydeaux, the black retriever sounded the alarm.

"Is this the Houseman resi-

dence?" he asked the boy in pajamas who opened the door.

"What do you want to sell? We buy nothing," Junior said.

"Is your father home?"

"Do you expect him to be in church?" Junior asked surprised. "He's still asleep."

"I want to talk to him," the man from the bunko squad said.

"Come back in an hour," Junior advised. "He never gets up before ten on Sundays."

"Police," the man said and put his foot in the door.

"I know we live in a fascist state," Junior sneered. "What has Jim done? Bent somebody's fender?"

The bunko man pushed Junior back and was inside the house.

"Illegal entry," Junior said. "Show me your warrant!"

"Show me your father." The bunko man felt hot under his collar.

"Who is it?" Bleary-eyed, Jim looked out from behind the bedroom door.

The man flashed an identification.

"Police. You James Houseman?"

"I don't know what you want," Jim said.

"He has no search warrant. This is breaking and entry," Junior, who also read law books, said.

The man, whose name was

Kresneczek, followed Jim into the living room.

"What is this all about?" Jim asked.

"Did you put this ad in the *Fresno Bee*?" Kresneczek produced a newspaper clipping from his briefcase.

"Sure. I did. Sit down and take it easy. It's Sunday, you know."

"He should be in church," Junior remarked.

"Make your own gasoline," Kresneczek read. "Do it at home. Safe. Cheap. Simple. Gas-Ex kit will produce one gallon of essence in five minutes. Send ten dollars to Gas-Ex Productions, Three Rivers, California 93272. Box 275. Gas production kit and precise information will be sent to you. Satisfaction guaranteed."

Kresneczek folded the culling and put it back in his briefcase, then produced another clipping.

"Do you want to buy a kit?" Jim asked. "I had a hundred made up and sold them in five days. I might have one left."

"You use the mail to defraud," Kresneczek said. "That's a federal offense."

"I'm not defrauding anybody," Jim said, angrily. "We're selling a genuine product. We also have a patent pending, and are incorporating. We might even go public. So where is the crime?"

Kresneczek quoted from the

leaflet which accompanied the Gas-Ex kit: "Your urea, which also is known as human urine, will easily be converted into a fluid that will, without damage to your engine, drive your automobile like high-grade ethyl gasoline. Fill the kit with urea, which is available in every household without cost, and add the included ingredients. Plug the container into an electric outlet and watch the driving essence collect, as described in this pamphlet."

Kresneczek fastened thyroid eyes on Jim.

"This will have dire criminal consequences, Mr. Houseman."

"Did you ever try it?" Jim asked. Junior watched Kresneczek fascinated. He reminded him of Telly Savalas as Kojak.

"I don't have to try it," Kresneczek said. "But I have a warrant for your arrest."

"Well," Jim said, while patting Junior's back reassuringly, "we're selling the genuine article. Should you arrest me, I'm going to sue your department. I can prove that the ad is on the level. Want to see a demonstration?"

Kresneczek looked up unsure.

"If you can prove it — though I don't think you can..." he said. Assuming that the man was right, he had a case which would reflect on him and his department.

They entered Junior's room,

which showed, beside the unmade bed, the long table with chemical and mechanical gadgetry.

"This is the item we're promoting," Jim said, picking up a plastic container from which an electric cord dangled. "Let's fill it. But I just — relieved myself. Maybe Junior could supply."

"For that guy? Not a drop!" Junior objected. "Let him do his own job."

"Would you accommodate us?" Jim asked, holding out the plastic vessel, like one finds in clinics, but larger.

"You're insulting!" Kresneczek said.

"This is an emergency. If you can't do it — sorry, no demonstration." Jim played the situation with candor.

Junior turned on the water faucet in the bathroom.

"Okay," Kresneczek said, the running water stimulating an urge. "If that is essential to arrest you, I'll do it."

The deed done, he watched the container produce Gas-Ex. Jim filled the tank of a small gas engine which stood on Junior's work bench with the essence. The motor started with an eager, cracking noise, ran its piston up and down, emitting small puffs of smoke.

"I'll be damned," Kresneczek said, awed.

"Take a Gas-Ex kit home," Jim

said with generosity. "You could drive the family car at practically no cost. How many are in your family."

"I have seven children," Kresneczek said. He saw the advantage of Gas-Ex immediately.

"What a wealth of essence!" Jim exclaimed. "Why waste it? There're only three in our family, and we have to be saving. But seven kids!"

"All girls," Kresneczek confided. He suddenly felt sympathy toward Jim and even the boy.

"Girls produce more liquids than boys," Jim said. "That's statistics. Take this kit along. It's a present, not a bribe. Save money! Let's stop paying American dollars to the greedy Arabs! Break the monopoly of the big oil combines! Be patriotic!"

"I think you got a point!" Kresneczek said warmly.

"We can't handle all that mail of yours," the postmaster in Three Rivers said to Jim and Junior, who had arrived in the station wagon to pick up the mail. "We're not equipped to process that kind of volume! Besides, you're sending off hundreds of packages every day. We can't handle that much in our rural office."

"Then get more help," Jim said. "The government has a monopoly. If they cannot manage, make the

post office a public corporation that is more efficient."

He took a sack of mail from the postmaster and drove home.

A Continental was stopped at his door. A white-haired, distinguished-looking man in his sixties stepped out and followed Jim and Junior.

The garden behind the house was filled with hippies, who packed Gas-Ex kits into cartons. Their girlfriends labeled and addressed them. Vera supervised.

"Pardon me," the white-haired gentleman stopped Jim.

"Want to buy a Gas-Ex kit? We only sell by mail," Junior said, suspicious of strangers who could turn out to be another Kresneczek.

"Oh, we have several," the man said. "My name is O'Brian. I'm the representative of the Texas Oil Institute. I would very much like to talk to you, Mr. Houseman."

They entered the house and Mr. O'Brian left his Dobbs in the entry.

"What can I do for you?" Jim asked, sizing up the visitor.

"I wish you'd also call in Mrs. Houseman. She might be interested and delighted with what I have to say."

"Mal!" Junior shouted, watching O'Brian as Phydeaux would have.

Vera entered from the garden. She was, as always, immaculately dressed. It was her policy never to

be seen in curlers and without proper make-up.

"This is Mr. O'Brian from the Texas Petroleum Institute; he has something delightful to say to us," Jim introduced. "Vera, my wife."

"Charmed, I'm sure," Mr. O'Brian said and settled down.

"Drop the preliminaries," Junior said. "What are you up to?"

"Don't be rude," Vera said, embarrassed, and smiled apologetically at O'Brian, who didn't seem to mind.

"The institute has authorized me to make a generous offer for your impending Gas-Ex patent," he said.

"It isn't for sale," Junior said.

O'Brian turned to him with benevolence.

"I wouldn't be that hasty, young man, before you have heard what I have to say." Disregarding the enemy at his side, he concentrated on Vera.

"We are prepared to pay the sum of twenty thousand dollars."

"For what?" Junior asked.

"For the rights, should a patent be granted," O'Brian said.

"Wait a minute," Jim said. "So far we've sold two hundred kits at ten dollars each. That's two thousand dollars. But there's a backlog of three hundred more. Why should we sell out for a lousy twenty thousand dollars?"

"He'll get up the ante," Junior,

who could play a vicious hand of poker, said. "Say, mister, how about a million?"

"Do you know what a million is, young man?" O'Brian turned condescendingly to Junior.

"Sure. A thousand times a thousand dollars," Junior said. "But a million isn't what it used to be. Even a billion isn't what it used to be. That's what the richest man in the world, Mr. Paul Getty, said in a *Playboy* interview."

Vera looked startled.

"I don't know why Mr. O'Brian should pay us a million."

"If it's worth twenty thousand, it's worth a million," Junior said stubbornly. "I'm part owner, you know. You need my consent. And I don't sell."

"Well, we could discuss any kind of sum," Mr. O'Brian said smoothly. "I'm sure we would come to an agreement on an amount satisfactory to both parties."

"You mean you'd be willing to pay a million for the Gas-Ex patent?" Vera asked. Her comprehension of money was limited by Jim's income as a professor of chemistry. If O'Brian would have mentioned a hundred thousand dollars, she would have been able to understand such a sum.

"I have the authority to discuss any compensation," O'Brian said dryly. "But the sum of one million seems to be a little inflated, don't

you think so, Mr. Houseman?"

"How much money would you call not inflated — five hundred thousand?" Jim asked.

"Five hundred thousand?" Vera echoed in half a faint.

"We could make it that amount," O'Brian said with a condescending smile, "if that sum would make you happy. Just think what you could do with such a sum. Junior's education, luxury cars, a bigger house. You could travel. Your lives would be secure to the end of your days."

"And what about the government's tax bite?" Junior asked. "We would be in the ninety-percent bracket."

He also read books about income tax.

"Oh, our accountants would find a way to circumvent that problem, since you have a corporation. When you have a corporation, many things are possible. We even might agree to carry your tax burden — after all, this is a business transaction. It wouldn't set us back a dime," O'Brian said.

"No deal," Jim said. He resented the attitude of big business which had access to exemptions an ordinary citizen does not have.

"It's all perfectly legal," O'Brian said. "Laws have been written for the citizens to take

advantage of them. Now, shall we say half a million for the patent of Gas-Ex?"

He looked at Vera, whose larynx froze with shock and surprise.

"No soap," Junior said. "Just take your filthy money and leave us alone."

"Is that your decision, too?" O'Brian's eyes fastened coldly on Jim.

"My son is right. What would we do with five hundred thousand dollars? It would upset our family structure. I'd rather take my chance with Gas-Ex and see how it develops. Besides, it gives the hippies in Three Rivers something to do."

"You're ordering your kits from the Ellerbach Plastic Corporation and the electric circuits from Union Electric. I'd like to tell you that those companies are part of our combine. They might find it impossible to fill your order. You might have a difficult time getting supplies, Mr. Houseman." O'Brian threw off the sheep skin under which he had been hiding. "You also would need financing. I wonder if that money would be available to you. I see many complications coming your way. Besides, the check-up on your financial status reveals that you are late in several payments, which hurts your credit. And there are more

impediments which I don't want to mention. It isn't right to fight institutions like the Texas Petroleum Combine. We have ways to defend ourselves."

"So far I have been attacked, not you," Jim said furiously, getting up. He looked taller than five foot ten. He looked six foot eight to Junior. "Shall we end this conversation? It doesn't lead to anything."

"But five hundred thousand dollars!" Vera whispered. She knew Jim and Junior had spells of paranoia.

"How much more allowance would I get if we accepted?" Junior asked sanely.

"Not a penny more," Jim said and accompanied O'Brian to the door.

"You know, of course, what you are doing," O'Brian said, picking up his Dobbs. "I'll keep my offer open till tomorrow. Here is my card. Then you'll hear from our legal department."

"Blackmail," Jim said. "Try it."

He closed the door behind O'Brian as Phydeaux barked at the stranger.

"What are we going to do now?" Vera asked in despair. It was hardly possible to enter the living room. Letters were piled up everywhere. Vera had been to the

market to get empty cardboard boxes, but they were overflowing. "All those orders! You can't fill them. And, if you can't, Kresneckeck was right. This is mail fraud. And to send all those letters back would cost more than a thousand dollars on stamps alone. Why didn't you take the five hundred thousand? We would be rich!"

"Don't blame me, blame Junior," Jim said cowardly.

"You are insane," Vera said. "My mother warned me not to get married to you. 'Don't marry that man,' she said, 'he has an insane streak in him.' And she was right."

The telephone rang.

"Who?" Jim said into the receiver and his mouth narrowed. "What? Not even two thousand? Okay!" He hung up.

"The Ellerbach Plastics. They say they are out of PolyVynel Chloride. They can't deliver. Not even one more kit!"

"That's O'Brian; he stopped them," Vera said. "Why don't you phone him and take the money!"

"I'd rather go to prison," Jim said heatedly. "Do you think Junior would knuckle under the threats of big business?"

"The boy is only eight," Vera replied. "You don't have to listen to him."

"Multiply his age eight times; that's what his brain is like. He has

more sense than you and I together."

"You talk about yourself," Vera said, poison in her voice. She felt like a fly in a spider's web.

"Can't you see what terrific business Gas-Ex is going to be? All I have to do is to interest a financial group. And we'll be set for life."

"Yes, behind bars," Vera said. "You haven't got the time to go through negotiations. Those letters are orders. There's money in every one of those envelopes. Checks, cash, postal orders. I don't want to touch them. We were so happy before you gave Junior that chemistry set. What are we going to do now?"

She had tears in her eyes. The telephone rang again.

"Don't pick it up," Vera cried. "I bet it's another disaster!"

"Yes, this is Mr. Houseman speaking," Jim said into the phone. "What is it? Long distance? Tokyo?" He put his hand over the mouthpiece. "It's Tokyo," he said in a whisper.

"Who wants you from Tokyo?" Vera asked.

"Maybe the Emperor of Japan," Jim guessed. "Yes, yes, this is Mr. Houseman. Yes, Mr. James Houseman. Yes, personally. Who wants him?"

"This is the Shimbashi Minto-Ku Company. And this is Mister Shinken Furukawa speaking. Mr.

Houseman, we tested your Gas-Ex device and we are very impressed by it."

"Glad you like it. How many kits do you want to order?" Jim asked.

"We need ten million right now and another ten million in a week," Mr. Furukawa said.

"Twenty million. Let me make a note of it before I forget," Jim said, with a desperate laugh. "How do you want them delivered? Sea freight or by air?"

"I'm asking your indulgence," Furukawa said. "Has the Gas-Ex Corporation the capacity to fill such an order immediately? That question is not intended to belittle your esteemed corporation."

"Glad you did ask me," Jim said. "I could deliver twenty."

"You could? Twenty million?"

"No, just twenty. You see we just discovered a bottleneck."

"That's why I was inquiring, Mr. Houseman," Furukawa said. "I got a call from the Minister of the Commerce. The Minister of the Commerce visualizes your invention as the salvation of our energy crisis. He has given our company, the Shimbashi Minto-Ku Corporation, the order to go into production of Gas-Ex kits at once. Please come to Tikyo immediately, for signing the contract."

"I'm very sorry," Jim said. "But I'll have to discuss this matter with

my partner. Just today I received a confirmation from the patent office in Washington accepting my application. And my lawyers are drawing up very important documents. That would keep me here for a while."

"What does he say?" Vera asked. Her question didn't reach Jim's ear.

"Since we are under great pressure of production," Furukawa said cheerfully, "we also anticipated that possibility and took the liberty of dispatching our representative, Mr. Hiko Hiromitsu, to the United States. He should be there already to conclude a deal with your corporation, Mr. Houseman. I might add that the Shimbashi Corporation, which owns the longest assembly line in the world, has cleared that line for the exclusive production of the Gas-Ex kit. To be frank with you, we already have started to produce."

"I own the patent, Mr. Furukawa," Jim gasped.

"This we are aware of; that's why Mr. Hiromitsu is on his way. We do not infringe on your patent, Mr. Houseman. You will receive a royalty on every kit. But since speed is of the utmost urgency, we took the liberty of starting production. You understand my English?"

"It's perfectly clear to me," Jim said.

"I studied at Harvard business

school," Furukawa said with modesty, "and I pride myself not to make mistake in your beautiful language. We are honored to conduct business with you."

"Listen, I have orders here for ten thousand Gas-Ex kits," Jim said, shaking off his professorial way of thinking and breaking the cocoon which had enwrapped the businessman in him.

"Ten thousand? That's only two hours' production on the assembly line. We will air-freight the kits to you, packed and labeled. Mr. Hiromitsu will take care of the request immediately. Please don't be of uneasy mind. Glad to assist you with our humble facilities. We would, of course, like to take over world production and distribution. I pray this will be amenable to you."

"I'll discuss the situation with my partner," the newly born businessman said. "And my lawyers."

"This is agreeable to us. Mr. Hiromitsu will contact you. He also is a lawyer. Our humble thanks, Mr. Houseman."

Jim hung up and collapsed in a chair.

"A nightmare," he said.

"What happened?" Vera asked. Since she had heard only Jim's voice, and not that of Mr. Furukawa, she had tried to piece things together.

"A nightmare! How much income tax will we have to pay?"

"Ask Junior," Vera replied.

The Houseman family sat on a firecracker that developed into a hydrogen bomb explosion. On the way to Fresno, where Mr. Hiromitsu was staying at the Del Webb Hotel, a roadblock of highway patrolman stopped Jim's station wagon.

"Looking for a kidnaper?" Junior asked. For a moment Vera felt the unmotherly urge that Junior should have been the victim.

"Emission control," the highway patrolman said. "Keep your motor running."

His companion stuck a hose in the exhaust of Jim's aging station wagon.

"You're making a lot of stink, mister," the patrolman said.

"It's good stink," Junior replied.

"It smells putrid." The patrolman was silly enough to let himself be roped in into a conversation with Junior.

"That's Chanel Number Five, mother's perfume," Junior said. "And we're using Gas-Ex, the new driving fluid."

"Gas-Ex? I've heard about that stuff," the patrolman said. "That's a joke. Running a car on urine!"

"On Gas-Ex," Junior said. "Calling it what you said, officer, lowers its image in the public eye."

"Wiseguy," the officer said and turned to his companion, who measured the hydro-carbon content of the exhaust.

"Can't get any, the meter's broken," he said.

"It isn't," Jim called through the half-open window. "That car has zero hydro-carbon emission."

"Doesn't exist," the patrolman said. "There isn't a car with zero hydro-carbon."

"Yes, using the Gas-Ex kit," Junior advertised.

"It's the meter. Sometimes it works, sometimes it doesn't," the patrolman with the meter said. "This is the fifth car where the meter's on the bum."

"Five cars that use Gas-Ex kits," Junior explained. "Man, the police never learn. They're brain-washed and never change their outlook on life. Soon you'll run your car on Gas-Ex, officer. How's your bladder?"

"Junior," Vera exclaimed, shocked.

"Wiseguy," the patrolman repeated. "You better bring that car in for inspection." He wrote out a ticket and passed it on to Jim. "Sign on the line."

"Why should I?" Jim disliked signing official documents.

"Sign it, Jim," Junior said. "We want an official confirmation that Gas-Ex doesn't produce smog. That's worth another billion."

"Right," Jim said.

"What?" the patrolman asked confused.

"Off," Jim said and drove on. He didn't get far. The car sputtered and stopped. Jim managed to drive it to the curb.

"It ran out of juice," he said. "What do we do now?"

"Nothing to it," Junior said. "There's a Gas-Ex kit in the trunk. I took the transformer along, the little one that changes twelve volts into a hundred and ten. Just plug it into the cigarette lighter. As it happens, I have the urge. I think I got enough to get us to Fresno."

"There drifts another ten million into our orbit," Jim said, opening the trunk and passing the Gas-Ex container to Junior. "Let's tell the Japanese that nobody who uses Gas-Ex will ever run out of gas on the road."

There was a traffic jam in front of the Del Webb Hotel in Fresno.

"You can't park in the garage, it's reserved," the attendant said to Jim. "Got any business in the hotel?"

"Yes, with Mr. Hiromitsu from Tokyo."

"Everybody wants to see Mr. Hiromitsu. What's your name?"

"James Houseman."

As if Jim had introduced himself as Dr. Henry Kissinger, the attendant's eyes became starry.

"You got the priority," the attendant said. "Sir, please follow me." He ran in front of the station wagon, guiding it through the traffic.

"What's going on?" Vera asked startled. "Are we royalty?"

"Money is royalty," Jim said smugly.

There was a great deal of money on his account which he couldn't touch, being advised by Mr. Blum of Blum, Blum, Fitzgerald and Cohn. Mr. Bernard Blum had introduced Jim to Mr. Manny Blum and Mr. Jacques Cohn, attorneys-at-law. Mr. Fitzgerald did not exist. That Scottish-sounding name was put on the letterhead to make it an integrated firm.

"I'm going to park your car, please go ahead, sir," the attendant said.

The hotel lobby was milling with people of all nationalities. Holding Vera and Junior by the hand, Jim stood forlornly in the crowd.

"Mr. Houseman?" a young Japanese in a smart business suit approached Jim as if he had known him for years.

"How come you know my name?" Jim asked.

"We have taken the liberty of having photographed you a few days ago," the Japanese said. "Mr. Hiromitsu has supplied his staff with that identification in order to

facilitate your arrival. Mr. Hiromitsu is waiting for you anxiously at the banquet room. Kindly follow me."

"Who are all those people?" Jim asked startled. He felt his hands gripped by his family as though they were afraid of getting lost in the crowd.

"Mr. Hiromitsu just bought the Hotel Del Webb. It now has become the Western headquarters for the Japanese-American Gas-Ex Corporation."

"There isn't a Japanese-American Gas-Ex Corporation," Jim said looking for his lawyer, who was supposed to meet him.

"I have to go to the lady's room," Vera said in a desperate whisper.

"Don't waste it," Jim muttered. "We might need gas to get home."

For the first time since Junior was five, he didn't let go of his father's hand.

"Who are those big guys following us so closely?" he said, scared.

As if Mr. Hiromitsu's assistant had ears at the back of his head, he replied, "Secret Service, at our request, Mr. Houseman, Junior."

"Secret Service?" Junior repeated, and the faces of Mannix, Columbo, and Hawaii-Five-O jumbled through his mind. His curiosity evaporated his fear like the midday sun the morning fog.

"You are personalities foremost

in the limelight of the world," Mr. Hiromitsu's assistant said, flowerily. "It might be conceivable that jealous people who produce evil thoughts might want to harm you. We want to protect you from getting harmed."

"I don't like it," Vera said. She wished she were back in Three Rivers and in her home. Wishing Gas-Ex never existed, she would gladly buy gasoline at any station from here on.

The banquet room was filled with a crowd that gathered around an enormous horseshoe-shaped table. Dozens of people conversed in many different languages.

"Mr. Houseman?" a small grey-haired Japanese bowed and, lifting his right arm in an angle, indicated the direction he wanted Jim and his family to move. "I am honored to make the acquaintance of so eminent a scientist." He inhaled with a hissing sound, as it is the polite custom of the older Japanese to keep any smell of breath away from their guests.

"I'm not the inventor of Gas-Ex, my son is," Jim said, and Mr. Hiromitsu bowed again, this time deeper to hide his surprise.

"Amazing to meet such young a genius," he muttered.

They reached the top of the horseshoe table where three chairs were marked with *President*, *Vice-President* and *Mrs. President*.

"One moment," Mr. Bernard Blum said. He was Jim's lawyer from San Francisco. "May I have a word with my client in private?"

Mr. Hiromitsu faded away at once.

"Don't sign anything without checking with me," Mr. Blum said.

"I haven't read anything I should sign," Jim said. Having Mr. Blum around made him aware that there was terra firma under the soles of his shoes.

"This room is full of international sharpshooters, who want to steal you blind. But I have asked Mr. Clifton from Washington to advise us."

"Who is Mr. Clifton?" Jim asked, the ground under his feet less firm than before.

"He is the famous Washington lawyer and advisor to three presidents. He is the former Secretary of the Interior and one of the highest priced attorneys in Washington. I engaged him in your name."

"Engaged him? How much does that cost?" Vera asked, a tidal wave of panic approaching her.

"Fifty thousand for the consultation and, of course, a small percentage of the Gas-Ex patent."

"Fifty thousand — which we will have to pay!" Vera gasped, the wave having reached her.

"It's the lowest fee Mr. Clifton ever asked, because he saw at once a highly beneficial ecological future

for Gas-Ex. Mr. Clifton is very much concerned about ecology."

"But we haven't got fifty thousand," Jim said, the wave of panic sweeping over him, too.

"I wouldn't worry about that right now. Fifty thousand is chicken feed when it comes to global business," Mr. Blum said. "And as Gas-Ex is beginning to shape up, fifty thousand might just be a pee in the bucket."

"Don't mention that word," Vera said. "That's what got us into trouble."

Mr. Hiromitsu pounded the gavel on the table. At once the room fell silent.

"May I introduce the originator of the Gas-Ex device, Mr. James Houseman and his brilliant son, James Houseman, Junior," Mr. Hiromitsu bowed toward Jim, "and his gracious lady, Mrs. Vera Houseman. Mr. Houseman is the president of the Gas-Ex Corporation, and his son the vice-president."

Stunned, Jim looked at dozens of faces and the double number of clapping hands.

"Say nothing," Blum, who was sitting beside him, whispered. "Those people will twist every word around until it suits them. Words one doesn't say one doesn't have to take back."

Jim grinned, and Junior copied his expression.

"Mr. President," a man at the end of the table said in a clipped British accent, "is it true that you turned all the rights of the Gas-Ex patent over to the Shimbashi Corporation?"

"No comment," Mr. Blum whispered.

"No comment," Jim said.

"I'm speaking for the Texas Petroleum Institute —" There was Mr. O'Brian in his sheep's best. "The employment of Gas-Ex is very limited. Assuming that a hundred million people in the United States use it and supposing that more or less than one quart per individual could be produced, that would amount to only twenty-five million gallons a day, while the U.S. daily requirement is six hundred fifty million gallons presently. Gas-Ex is, so to speak, a drop in the barrel."

But a thin, tall man shot up, introducing himself as the representative of the American Farm Bureau.

"The American cattle industry produces many cows, horses, and sheep. Since the average production per cow is seventeen quarts per day, and that of a horse fifteen, we will have a net supply of three hundred fifty million gallons of urea." He lifted plastic containers of unorthodox shapes for everyone to see. "Here are devices for the male and for the female animal.

One could make replicas of those designs for smaller animals, like dogs, goats, and cats. Though cats might not stand for a urinary impediment."

"We have the facilities of producing any amount of Gas-Ex implements at our factories in Kyoto," Mr. Hiromitsu injected.

"Of course, an auxiliary toilet will replace the former types," the representative of the American Standard Corporation said. "Our newly constructed factory in Taiwan could supply fifty thousand toilets a week. The government of Free China has assured us that they will put the whole industry of Taiwan at our disposal should Gas-Ex require a bigger output."

"There is also the possibility of synthesizing Gas-Ex. That, of course, would remove all inconveniences, which the personal production of essence imposes on the public," the representative of the German I.G. Farben Corporation said. "On contracts with Dutch Shell we already have begun tests at our plants in Hochheim, Bavaria. But so far the Gas-Ex apparatus does not work with synthetically created fuel. Something is missing — some factor!"

"The pee factor is missing!" Junior said in his high voice.

"Quiet," Vera said. The heads of the assembly turned toward the small figure.

"I tried different concoctions, since my mother resented the smell of it. But nothing works except the real stuff."

Finding himself in the lime-light, Junior enjoyed his prominence.

"That's as well," the secretary of the United Arab Nations said. "Gas-Ex disturbs the economy of our countries. We live off the wealth in our ground. Gas-Ex would demand a revolutionary adjustment of our prosperous economy."

"That's true for any country," O'Brian said. "Just consider how many gas stations will be out of business. How many refineries, how many factories that produce pipe lines and oil-drilling equipment will have to be closed. What about the investors, the little people who own the big oil corporations and who will see their life savings disappear? I'm afraid Gas-Ex will trigger a recession, if not a world-wide depression. Embracing Gas-Ex means embracing disaster."

"We have drawn up a petition to forbid and outlaw the production of this invention in the name of National Security," the representative of Standard Oil of Alaska said. "I'm sure many governments will second our motion."

"You'll never be able to overcome the objections of the Department of Defense," the Undersecre-

tary of Defense, who had been flown by Air Force One to Fresno, said coldly. "The military establishment would become independent of foreign imports. Military vehicles, tanks, self-propelled guns, even the Air Force would be able to produce their own gasoline without having to rely on vulnerable pipe lines."

"Drink more beer, drive more cars," the representative of the beer industry said. "We already registered that slogan."

"As a chemist at the Stanford University," the famous Nobel Prize winner, Professor Nimmermeer said, "I have to clear up a misunderstanding. More consumption of beer or soft drinks would not increase the flow of urea which is essential for the production of Gas-Ex. Beer and soft drinks, also wine, are mostly water, and show only traces of the essential ingredients."

The representative of the beer industry at once saw an advantage in the professor's statement.

"We will fortify our beer with protein! Excellent! Drink protein-fortified beer, and drive more! This will be a new world-wide product. Coca-Cola protein fortified! Seven-Up, Dr. Pepper proteinized! We might be able to stop the lack of protein in countries where the population suffers from a lack of protein!"

"Can you visualize how many new industries will replace the old-fashioned cracking plants, which pollute the world?" Mr. Clifton said, with an expression of ecstasy in his eyes. "No more smog! We will see again a star-studded sky! Our forests will get a new lease on life, so will the world population. When the gas and oil industries fade out, they will be replaced by innumerable new industries, and unemployment will be alleviated all over the world. The automobile industries will prosper, and with them a greater turnover of pollution-free cars will forestall the depression which threatens us now. Besides, we would stop the outflow of capital to the Arabian states, which by 1980 will collect one hundred seventy billion dollars, enough to buy up all big industries in the Western hemisphere. Is there any country that wants to become the satrap of the Arabian world?" Though at that point the Arabian delegation walked out, Mr. Clifton with that speech earned his \$50,000 dollars. "The possibilities of Gas-Ex are unlimited. There is no way either of stopping the production of Gas-Ex, however hard its foes are going to try. Science, like truth, has its own momentum. It cannot be stopped. Of course, certain privileged industries in many countries will lose their influence. But the world

will watch out that new privileges won't arise, privileges which enslave commerce, prosperity and the liberty of the people!"

"I'm so glad we're going home," Vera said, exhausted. The Chevrolet station wagon was moving down Highway 99 at legal speed.

"Well," Jim said, his mind cluttered up with thoughts he could not, a simple professor of chemistry, digest.

"You know what came out of all that talking?" Vera said, unhappy and with suppressed anger. "We'll have to pay fifty thousand dollars to that lawyer in Washington. That'll keep us broke to the end of our lives."

Junior had been silent, making calculations with the stub of a pencil on the back of a Kleenex box.

"If the Japanese sell one billion Gas-Ex kits, which by a world population of three billion would be one for three people, and if the Gas-Ex kit sells for ten dollars and costs one dollar to produce, then the Gas-Ex Corporation will collect nine billion dollars. And that's a lot!"

"Don't forget there're production overrides, distribution, middlemen, jobbers, lawyers, court costs, infringements that have to be stopped, double bookkeeping by distributors, cheating, embezzlement, and, of course, taxes," Jim said.

"Ten percent of the shares belong to me," Junior said unimpressed. "That'll be nine hundred million dollars. I will be, of course, in the ninety-percent tax bracket. But I still will end up with ninety million dollars."

"And what are you going to do

FREE: 24th ANNIVERSARY ISSUE

The subscription coupon on the next page will bring you a free copy of our October 1973 24th Anniversary Issue, which is fast becoming a collector's item. It includes stories by Fritz Leiber, Randall Garrett, Kate Wilhelm, Manly Wade Wellman, R. Bretnor, Andre Norton and George Alec Effinger. You may use the coupon to enter a new subscription or to renew or extend your current one. The coupon is backed by this copy, and removal does not affect the text of the surrounding story.

with ninety million dollars?" Vera asked wearily.

"Raise my weekly allowance to ten dollars from those fifty cents," Juior said hopefully. "When we are home, we'll have to find the pee factor, you know, that missing stuff which makes synthetic Gas-Ex into working Gas-Ex. Will you help me?"

"If we find it, we'll be where we were before," Jim said. "Synthetic Gas-Ex will then be sold like gasoline. Why not stick to the Gas-Ex kit? If anybody drives more than he can produce, let him buy from Standard Oil, or Gulf, or the Arabs."

They stopped at a roadside restaurant. Jim and Junior took the Gas-Ex kit to the restroom. While

waiting for Jim, Junior read the headlines of the newspaper in the vending machine.

"Dutch send back *Jacqueline Onassis*, 500,000-ton tanker. Demand for Arabian oil drying up."

"I had a vision," Junior said, taking the Gas-Ex container from Jim but leaving the door open. "One day the desert sand is going to blow through the skyscrapers of Kuwait. Camels are going to walk again on the paved streets, and the Bedouins will again live in tents and not in highrises. They will live as they lived for thousands of years and be happy again."

Besides reading books on science and other subjects, Junior also subscribed to the *Smithsonian Institute Magazine*.

Mercury Press, Inc., Box 56, Cornwall, Conn. 06753

Enter my subscription to F&SF, and rush me a free copy of the 24th anniversary issue. I enclose ☐ \$10.00 for one year; ☐ \$24.00 for three years.

9-6

Please print

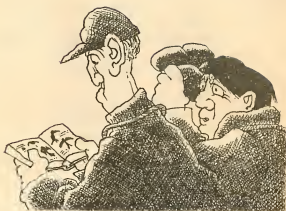
Name

Address

City State Zip

Add \$1.00 per year for Canada and Mexico; \$2.00 for other foreign countries
Please allow six weeks for delivery of first copy.

Graham
Wilson



"I don't think those are birds at all — I think they're
just little curved lines!"

STARDANCER

When my father went to space
I woke up one morning and he was gone
And I would lie out in the yard
And try to see a falling star:
Something to wish upon

Out there on the edge of things
He would be freelancing
In the midnight sprinkled sky
He would open up his hands and go stardancing

(It's falling, always falling
And I would watch it all
To see me a stardancer
And watch my father fall)

Sometimes I would watch a star and it would
break loose from the sky
A tongue of fire in the air, when a star
falls home to die
I always felt my father touched them, and
if the sky were torn,
Somewhere beyond his hand
Another one was born

(It's falling, always falling
And I would watch it all
To see me a stardancer
And watch my father fall)

For a man who needs a place where he can see a star
The open land above the air is where
the answers are
When stars go burning through the night
You can never touch them all
On the razor-edge of space
Stardancers sometimes fall

(It's falling, always falling
And I would watch it all
To see me a stardancer
And watch my father fall)

When my father went to space, I woke up one morning
and he was gone
And I would lie out in the yard and try to see
a falling star
I could wish upon

...Stardancer, stardancer

— Tom Rapp

Mr. Young is back with a powerful and moving story which is the biography of one Will Brown, who was — in the words of his omnipresent biographer — a sad mortal with the soul of a poet and the calloused palms of a day laborer . . .

Milton Inglorious

by ROBERT F. YOUNG

Schmaley, the little town where Will Brown was born, had as its economic nucleus an industrial institution known to the townsfolk as "The Shop." In its front office Will's father worked as bookkeeper for the handsome (in those days) sum of \$31.75 per week, and every Christmas he received from Mr. Howis, the President and General Manager, a crisp new \$10 bill. Will's father, the townsfolk frequently said, had it made.

But enough of Will's father: this is the Biography of Will. It can be argued, perhaps, that it is not within my province to write it, but it cannot be argued that I am not qualified to do so. I was present at his birth; it was dawn: I heard his first shrill scream. Thereafter, I observed him all his life.

When he was ten, his mother noticed what long fingers he had and decided he should become a pianist. So he began taking lessons

from Miss Horliss, an old-maid music teacher with a tic in her left eye. Every Saturday afternoon she came to the house where Will lived and sat beside him on the piano bench for one solid hour and listened to him play Czerny on the upright piano his mother had talked his father into buying, and for one solid hour she carped and carped and carped. Maybe if she hadn't carped so much, Will would have gone on to become a famous virtuoso, although this is doubtful. As matters turned out, he told his mother, after three miserable months, that he wanted to quit. He was astonished when she dismissed Miss Horliss the very next Saturday. Will didn't understand his mother very well; as a matter of fact, he didn't understand her at all. His earlier pianistic endeavors had repeatedly conjured up in her mind a thrilling vision in which she saw herself sitting at a massive

grand piano in a huge concert hall holding her long fingers aloft for a suspenseful moment and then bringing them down upon the gleaming keyboard and sending series upon series of exquisite notes soaring over the awed audience like flights of silvery birds; but his mother was nothing if she was not mercurial, and recently the original vision had been supplanted by a second, similar to the first in all respects save three: she was standing instead of sitting, the grand piano was gone, and the silvery birds were flying out of her mouth.

Freed, Will went on to less exacting pursuits. That same year, he discovered juveniles and romped enthusiastically through the Hardy Boy Books, the X Bar X Boy Books, the Radio Boy Books, The Ralph Henry Barbour Books for Boys, and just about every other Boy Book he could lay his hands on. Charged with such fare, he conceived the idea of becoming a writer himself, and that summer he resurrected a loose-leaf notebook left over from the fourth grade and began writing nights in his room. He wrote stories about honorable halfbacks, keen-eyed boy detectives, big dirigibles and, later on when he happened upon *War Birds*, stories about spectacular WWI dog fights. However, despite their diversity, his stories shared a common fault: he

never finished any of them. Near the end of August his Muse deserted him, and he decided he didn't want to be a writer after all, that he'd grow up to be something else.

His career might have ended then and there had not outside pressure been brought to bear on him as he grew older. He was a quiet boy, and people thought that because he seldom said very much he was profound, and this putative profundity together with his long fingers led a large number of his friends and relatives, including his mother (especially his mother), to encourage him to become a Great Writer. As a result, after he entered seventh grade he lured his Muse back into his room up under the eaves and set sail once more upon the Sea of Words. He copies parts of Zane Grey's *Tappan's Burro* and worked them into a story of his own, which he didn't quite finish, and penned several other pieces, which he didn't quite finish either. His father, despite a determined campaign launched by his mother and carried out daily at the breakfast, dinner and supper table, refused to buy him a typewriter, pointing meaningfully whenever the subject was broached at the upright piano standing silently in the living room. Thus handicapped. Will understandably lost interest in his chosen Profession, and finally quit. This time,

however, his Muse didn't desert him: she hung around, just in case.

Will's high school years roughly paralleled Hitler's acting out of *Mein Kampf*, but Will was only vaguely aware that such a book or such a personage existed. He was too busy correlating the sacred lies his teachers told him with the holy half-truths contained in his school-books. One thing, though — he began to notice girls. In fact, he even fell in love with one, although he didn't tell anybody, especially her. He worshiped her from afar and thought her pure and holy, like Elaine in the *Idylls of the King*; consequently he was considerably shaken up when she gave birth to a premature baby in the girl's room and was expelled from school. A quantity of his distress can be attributed to his having made her the heroine of a story he'd written in his room up under the eaves. The story was entitled *Footlights*. The hero was a struggling young playwright living in the garret of a cheap metropolitan rooming house, and the heroine was a free-lance model who lived across the hall. One night, "Peter" was slaving over a script, turning his room blue with cigarette smoke, when suddenly the free-lance model crossed the hall, entered and said, "Say, are you running a saloon by any chance?" a

remark clearly intended to convey both to Peter and to the reader the information that the cigarette smoke his room was blue with was turning her room blue too. Like her prototype, she was rather tall, rather slender, rather blond, and had a small pert nose. Unfortunately we never get to know much more about her, because three paragraphs later the story peters out.

When he graduated in the late 30's, Will still hadn't decided what he wanted to become. His mother wanted him to go to college, study journalism and become a Roving Reporter; his father wanted him to go to work in the Shop. Will couldn't see going to college till he decided what he wanted to become, and he considered himself much too young to start work in the Shop. There was a summer resort not far from Schmaley, and while ostensibly making up his mind what he was going to do, come fall, he spent his summer vacation swimming and looking for girls. Inevitably he found one — a plump pretty blonde named Rose. He fell in love with her instantly.

She lived in Natalia, a small community some twenty-five miles distant from Schmaley by car but some seventy-five by bus. Thus after she and her parents returned home, the only practicable way Will

could date her was by learning how to drive, acquiring his license and borrowing his father's Ford. For a long time she regarded him as a drip, but she put up with him between the dates she had with other boys and eventually (to her astonishment) she fell in love with him. One night when they were parking by an October woods, she took his left hand and cupped it over her right breast, it having become apparent to her by then that if she waited for him to make the first move she would be an old woman with gray hair and with her teeth falling out by the time he got up enough nerve. Will was both thrilled and horrified, and immediately he thought she was a whore. Whore or not, he still loved her, but the trouble was, he could no longer conduct his love-making on a high and noble plane, because if he did he would be sure to lose her. He was tortured for days as to what to do, and when he finally came to a decision and impetuously acted upon it, the result was disastrous, for his knowledge of coitus derived solely from the definition of it contained in his desk dictionary. His unsuccessful attempt at it roughly coincided with Hitler's successful invasion of Poland.

Understandably enough, Rose was irked by her lover's lack of sex education. Self-educated in such

matters herself by the sleazy novels she rented at 2¢ a day from the Natalia Pharmacy, she revealed to Will the source of her secret information and, generous girl that she was, offered to loan him the instructive novel she was at present perusing. Will, however, declined. He had already resolved never to defile this immaculate creature again, for the experience had revealed to him that physically at least the Act was as much of a mystery to her as it was to him. Ergo, she could not possibly be a whore, and ergo (since for him there existed no intermediate ground), she must be a virgin. Thereafter, he kept his love-making on the same lofty plane as before and resolutely ignored her sometimes frenzied attempts to lower it to an earthy level.

He continued to date her during the months that followed, not every night, but as often as his allowance and the availability of his father's Ford allowed. Meanwhile his father kept after him to go work in the Shop, which, after limping through the Depression, had fully recuperated and was galloping healthily along the economic trail. Finally the old man, to show that he meant business, cut off Will's allowance and (despite his mother's protestations) hid the car keys.

The month was May. Will shut himself in his room with the

intention of writing two stories, one for the *Saturday Evening Post* and the other for *Collier's*. But by the time he got to page 3 of story number 1 he began having second thoughts. Granted, he could knock out the two pieces in as many days, but a week, maybe even two, might elapse before the checks for them came through, and meanwhile he would be carless and unable to date Rose. Besides, he didn't have a typewriter. The Shop pawed at him with a long left, but he parried it deftly and went to work in the Schmaley canning factory. Not long afterward, he could be seen driving through the streets of Schmaley in a second-hand Buick, followed by a cloud of burned oil.

His anticlimactic courtship of Rose endured for another month. Then one Saturday night late in June a strange thing happened: instead of driving over to Natalia and taking Rose to a movie, as was his custom, he drove downtown instead, parked his Buick and stood on the street corner all evening talking with the canning-factory gang and smoking cigarettes. A week later, he visited a whorehouse and lost his virginity. After that, you couldn't keep him away from whorehouses. He even got to know the madam of his favorite one by name. Big Butt Betsy Buttinski. "Hi, Betsy," he would say to her when she let him

and the other fellows in. And she'd answer, "Hi, Will." He never went to see Rose again, and she never wrote to ask him what had gone wrong.

The Schmaley Canning Factory operated from late May to mid-November. This provided the workers with a sort of annual semisabbatical during which, thanks to the New Deal, they were able to draw semiwages in the form of unemployment insurance checks. Such an arrangement was ideal for a struggling young artist like Will; indeed, it was as though FDR had recognized his talent from afar and had decided to subsidize him. He decided, however — after an aborted attempt at a novel — to defer writing for the time being and to take up the piano again. That way, he would have two professions at his fingertips instead of only one.

Spurning Czerny, he went on to far more difficult compositions. In fact, he began at the top, or somewhere near it, perhaps with the intention of working his way down. He spent his first semisabbatical (to the despair of his mother, who now wanted him to become a floorwalker in a department store, and the disgust of his father, who hadn't spoken to him since spring) working on Beethoven's *Moonlight Sonata*, and very nearly mastered it. He would

practice all afternoon and well into evening, and then he would go downtown and have a few beers, either at Henry's Grill or the Peacock cafe. Afterward, he would go home and sleep till noon. To conserve expenses, he didn't renew the license on his Buick till after he got called back to work. Once he had the Buick back on the road, he immediately renewed old acquaintances at Big Butt Betsy's and other similar establishments. On his next semisabbatical he tried his luck with Rachmaninoff's *Prelude in C Sharp Minor* (one of my favorite compositions, incidentally), and was well on his way toward mastering it when the Japs bombed Pearl Harbor. By the time his draft number came up, he could play the prelude most of the way through, with only a minimum of mistakes.

For a while Will toyed with the idea of joining the Air Corps and becoming an aviator and engaging in dog fights with members of the *Luftwaffe*; in the end, however, he quite sensibly abandoned the idea and let the draft do with him as it would. In due course he was assigned to a port battalion that, after a prolonged spell of stateside duty, wound up on Bougainville. The island had been secured long ago, but it was said there were still

Japs back in the hills. If there were, Will never saw any. The port battalion's duties consisted of unloading cargo from Liberty and Victory ships. In many instances the cargo was beer, and it was only natural that the unloaders should drink some of it while they were unloading it, and it was only natural that Will, who operated a DUKW between the ships and the cargo area, should drink some of it too. Also, it was only natural that he should cache a case of it now and then.

Understandably, these were busy years for me, but I still managed to keep track of him despite my multitudinous chores. When he wasn't unloading cargo ships and/or drinking beer, he spent his time attending movies. He fell madly in love with Esther Williams and pinned a big pinup of her behind his bunk, and when *Bathing Beauty* came to Bougainville, he saw it seventeen times, following it from outfit to outfit like a faithful hound. Sometimes he had to hitchhike half the length of the island, and sometimes he had to sit through the picture in a pouring rain. No man ever loved a woman as devotedly as Will loved Esther Williams.

His mother mentined in one of her infrequent V-mail letters that his old girl friend had got married. Rose. He'd forgot all about her, but

he felt sorry for himself for a few weeks anyway. Toward the close of the war his port battalion was transferred to Luzon. When the *Enola Gay* dropped the big egg on Hiroshima, he was shacking up with a Filipino whore who had promised to go steady with him if he would pay her ten pesos per week, bring her a pack of Americano cigarettes every other day and deliver to her bamboo doorstep once each month three cases of American beer. When the war officially ended, he was sleeping off a *Paniqui*-whiskey drunk occasioned by his discovery that his Malaysian bedmate was "going steady" with six other swains, two of them from his own platoon.

His outfit's last tour of duty took place in Nagoya, Japan. There, it was gradually deactivated, but not before Will fell in love again. This time, the girl was a taxi dancer who worked in the May-You-Never-Forget-This-Sweet-Night Cabaret. Her name was Kojijiu and she was small and dainty, with a plump pretty face and sparkling brown eyes. The second time Will danced with her he asked her to marry him. She said Yes. But his orders were cut before he had a chance to request official permission, leaving him no recourse but to say good-by to her with the promise that he would come back to Japan for her

as soon as he got situated in the States.

By the time he reached stateside he had his immediate future all figured out: first, he would become a Famous Writer; then he would buy a private yacht and go back to Nagoya for Kojijiu. During the cross-country trip on the troop train he repeatedly visualized the yacht, with him standing on the bridge smoking a pipe and wearing a snow-white commodore's cap, sailing into Ise Bay, and Kojijiu, clad in a fauve komono, standing on one of the piers waving to him. By then, of course, he would be able to speak Japanese fluently, and when he walked down the gangplank and she came running to meet him, he would tell her nonchalantly in her own language that he had come back expressly for her, and afterward in some quiet cafe he would show her the magazine with his latest story in it or maybe even give her an autographed copy of his First Novel. After they arrived back in the states, man and wife, he would buy a big porticoed house on a high hill, and he and she would settle down to a harmonious life together with him writing mornings and reading afternoons (the way some of the English novelists did) and her strumming ancestral melodies on a samisen (in his mind the melodies sounded like Chinese wind chimes),

and the two of them spending carefree evenings on the portico drinking tall, cool mint juleps.

He was separated in January of '46. He hitchhiked home so he could buy a typewriter with his travel money, but on the way he blew every cent of it and part of his separation pay to boot in gin mills and on whores. His mother said he looked thin, and his father said he looked hard. He was surprised at how his room up under the eaves had shrunk, amazed at the smallness of his boyhood desk. No matter: he sold his Buick, which all this time had waited faithfully for him in the garage, for \$15, bought a used Royal and started teaching himself touch typing. He learned rapidly (it paid to have long fingers), and in less than a month's time he was ready to begin writing. He set to work at once on his first postwar story, a romance about a young girl who lived on the topmost floor of a twenty-story metropolitan apartment building and a boy named Peter who ran the elevator. But for some unfathomable reason he became bogged down before he'd even got to page 3, and had to start all over again. Again he became bogged down, this time in the middle of page 2. He realized then what was wrong: he'd started out cold. What he needed to do was warm up first. So he began drawing

books out of the Schmaley Public Library and reading them with a professional eye, copying down words he didn't know the meanings of and looking them up in his prewar abridged Webster's. Between books, he wrote long letters to Kojijiu, and she wrote long letters back, employing a translator because she didn't consider her own English worthy of the written word. But the translator formalized everything she said to a degree where her letters seemed cold and distant — the sort of thing a female bank teller might write to one of her favorite depositors.

Will's mother was curious about his New Girl and begged him to tell her about Kojijiu, but he refused. When he brought Kojijiu to America in his yacht, then he would tell her — not before. He was reading four novels a week now, sometimes five, and he had become a common sight in the carrels of the Schmaley Public Library. He would take out two books at a time, go home and read till about ten o'clock, and then go downtown and hang out in Henry's Grill or the Peacock Cafe till closing time, drinking whiskies with beer chasers and once in a while, gin-and-orange. Then he would go home and sleep till noon the next day and begin reading again about 2 p.m. If he didn't have to go to the library for more books, he would read

straight through till ten, taking time out only for supper. Then he would revisit Henry's or the Peacock, or both.

He maintained this rigorous regimen till June; then, perceiving that becoming a Famous Writer was going to take a little longer than he'd thought, he got his old job back in the Schmaley Canning Factory. His father, who all this while had been importuning him to come to work in the Shop, was furious. Undaunted, Will bought a prewar Ford on time and set out to renew old acquaintances. But to his chagrin the establishments he had once so blithely taken for granted were closed, and Big Butt Betsy was dying of uterine cancer. His correspondence with Kojjiu had by this time dwindled to a letter a month, and now it ceased altogether, seemingly of its own accord. Poor Will found himself without a girl.

Such a situation could not endure for long and didn't. He found a new girl almost immediately, in the stringbean shed where he worked. His job was dumping crates of string beans into a hopper, whence they emerged onto a conveyor belt that bore them between two rows of seated female employees armed with paring knives. One of these employees had snapping black eyes and wore a red bandanna handkerchief over her

black hair, and every so often she'd glance sideways at Will and their eyes would touch, igniting a brief spark, invisible to all save them, midway between her place at the belt and his at the hopper.

Inevitably these electric *oeillades* resulted in more intimate exchanges, and Will learned that her name was Lela. He'd heard from some of the fellows that she was an easy lay, but looking into the dark and liquid depths of her eyes, he knew that such could not possibly be the case. Besides, her older sister Sarah was a postulant in a convent. On their first date, he took Lela to a movie and straight home afterward. On their second, third, fourth and fifth. On their sixth, he asked her to marry him. She said Yes. Not that she had any such intentions, but being engaged to him would elevate her in the eyes of her other boy friends by showing them that she could matriculate any time she wanted to from an easy back-seat lay to a respectable housewife.

Elated, Will went home and wrote a story about her. And him. It was entitled *Pianissimo*. In it, he was a struggling young composer living in a cheap metropolitan rooming house and she was a tyronic girl reporter who lived across the hall. One night when "Peter" was sitting at his second-hand studio-piano slaving over a

piano concerto tentatively entitled *Rapture in Blue*, the girl reporter crossed the hall, entered his room and said, "Say, are you running a honky-tonk by any chance?" It was Will's intention to read the story to Lela on their next date, but he didn't quite finish it in time. Anyway, it would have struck a somewhat discordant note, for their next date deviated radically from its platonic predecessors.

Lela's parents were less stodgy than Will's and liked to do the town on Saturday night. Sometimes they didn't get home till three or four in the morning. On the Saturday night in question they didn't get home till five, which was a good thing for their peace of mind. Lela had asked Will in after the movie and had slyly put before him some hard cider she'd found in the cellar. In less than half an hour Will was smashed and so was she, and when she took off all of her clothes and ran upstairs, he ran after her. The scene of their subsequent activities was her sister Sarah's bedroom, and when Will asked Lela later why she had chosen Sarah's bedroom instead of her own, she said it was more fun doing it in a nun's bed. By that time they were doing it again, and the remark relegated itself to Will's unconscious. It was four when he slipped out of the house, got in his car and drove home.

Three months later, Lela informed him she was going to have a baby. It never occurred to him to ask her whether the baby might be someone else's, and she couldn't have told him in any case, because she didn't know. But she knew one thing: whether Will was the real father or not, he represented her one and only road to respectable housewifery.

They were married that fall. A week after the wedding, Will got laid off. His first impulse was to sit down at his typewriter and dash off a couple of short stories so that he and Lela would have something to live on besides unemployment insurance while he was writing a Best Seller. But Lela, who also had got laid off, insisted that they rent an apartment instead of living with her folks or his. Obviously, even with both of them drawing unemployment insurance and with a theoretical nest egg in the bank, the setup he'd had in mind wouldn't work, especially when the doctor and the hospital bills came due. Again the Shop pawed at him with a long left, and although he successfully parried it, the right that followed floored him. When his father told him there was an opening in the punch-press room, he took it. Five months later, Lela suffered a miscarriage.

Working in the Shop wasn't so

bad after all. Will had every evening and every weekend free, and so there was plenty of time for him to write. In the second year of their marriage Lela got a job in a dress factory that had recently moved into town, and not long afterward they bought a house of their own and moved out of the flat they'd been renting above Garson's Grocery Store. It was a pleasant little house, standing on the outskirts of town. They remodeled it from top to bottom and bought all new furniture. Will cut the lawn twice each week and put in a small kitchen garden in the back yard. Understandably, with so much of his spare time taken up, he had very little opportunity to sit down at his typewriter. The remodeling didn't go on forever, of course, and he didn't have to mow the lawn or keep up a garden during the cold months, but somehow whenever he got home evenings there was always some chore awaiting him, or some place he had to go, such as bowling or shopping. During the week he'd keep promising himself that Saturday morning he'd sit down and bang out a novelette and sell it to *Collier's* or the *Post*, but every Friday night he'd go out and get stoned, and Saturday morning he'd sleep till noon and half the day would be shot, and so he'd shoot the rest of it and get stoned again. Invariably, by the time Sunday

came, the only literary pursuit he was up to was reading the Sunday paper, and even this put a strain on his debilitated intellect.

Nevertheless, he never wholly abandoned his Chosen Profession, and he made it a point to keep himself well-informed and intellectually stimulated at all times so that when the Call came he would be ready. Every month he read *The Reader's Digest* from cover to cover, and each year he faithfully renewed his subscription to *The Writer's Digest*. He kept up with the Best Sellers and read all the book reviews he could get his hands on. And he wasn't entirely inactive in his own right, either. He began writing for TV even before he and Lela bought their first set. But alas! — the time element reared its ugly head again, and while he was able to get his first script well underway, he never managed to finish it.

Lela had vowed never to have another baby, and she never did. Without children to support and with both herself and Will working, they enjoyed a reasonably high standard of living — a standard that grew progressively higher as their take-home pays increased. Eventually they became discontented with their pleasant little house and built a posh (*poshlust?*) ranchstyle five miles out of town. They took out a fifteen-year mortgage, which kept their pay-

ments reasonably low and enabled them to trade cars every three years without undue financial strain, even with Will's drinking. He drank every day now. Every weekend he'd get smashed: in gin mills, at picnics, home — wherever he happened to be. Weekday evenings he'd hang out either in Henry's or the Peacock. Occasionally at first, and then at more and more frequent intervals, he would half turn from the bar and stare for long periods of time toward whatever table I happened to be sitting at, as though he were aware of my presence. There were times of course when he wasn't quite up to going out, and on these occasions he would sit in the living room, a six-pack at his elbow, and watch TV. Lela watched too, munching potato chips. She didn't drink herself. She wouldn't touch the stuff with a ten-foot pole, she said. She'd touched it once, and look at her now. And if that weren't enough, look at Will. Will let her rave. Lord, what he could have been if it hadn't been for her! What he had in mind, of course, was a Famous Writer. He would picture himself standing in a bookstore autographing copies of his novels for droves of pretty girls, only sometimes — usually toward midnight when the six-pack was almost gone — instead of picturing himself standing in a bookstore, the

cynosure of a frieze of girls, he would picture himself sitting at a massive grand piano in Carnegie Hall, his long fingers poised to strike the first thunderous notes of Rachmaninoff's *Prelude in C Sharp Minor*.

The years continued to pass. In the early 60's, Will's father retired from the Shop, sold the house and moved with Will's mother to Florida. Not long afterward, Lela's parents pulled up stakes also and moved to the Big Green Graveyard in the South. Lela's sister Sarah was serving in a mission somewhere in Africa. She never wrote to Lela, and Lela never wrote to her.

More years passed. Lela had an affair with the insurance man and one with the dress-factory maintenance man, to mention just a few. Meanwhile Will continued to drink. Once, shortly after Christmas while he was fumbling through the contents of the hall closet in search of a bottle he'd cached some time ago, he came upon a large, dust-covered cardboard box. He opened it hopefully, but all it contained was a dusty typewriter. Disappointed, he shoved the box back into the shadows and went on searching. That was on Sunday. He didn't remember the incident till Tuesday at work. He wasn't quite as sick then as he'd been on Monday, but he was sick enough.

His mind seized upon the typewriter and clung to it for dear life, and that evening as soon as he got home he dragged the box out of the closet, removed the machine and carried it reverently into the room just off the kitchen that, years ago, he'd set aside for writing but which had subsequently become the repository for household items no longer fit to use but not quite banged-up enough to throw away — in a word, antiques. After clearing a space in the middle of the floor, he dragged a dusty desk out of the shadows and set the typewriter on it. "As of this moment," he announced in a voice loud enough for Lela to hear, "this room is to be known and respected as my Office!" In the kitchen, Lela snickered.

Let's see now — what would he need? Typing paper, of course. A new ribbon, pencils. A notebook to jot down ideas in. An up-to-date desk dictionary. Paper clips, carbon paper, envelopes, stamps. The stamps would have to wait till tomorrow, but he could get all the rest at Lessandro's Drug Store tonight. Immediately following supper he got into his overcoat and galoshes and told Lela he was going into town for supplies. ("You mean you're out of hootch already?" she called after him.) He was surprised at how cold it had got, and he let the LTD warm up for a while. Then

he backed it out of the garage and re-closed the automatic overhead door. The highway was coated with ice, and he took it easy. Real easy. He decided to have a quick one, before picking up his supplies, and parked as close as he could get to the Peacock and went in and told George to bring him the usual. The number of cars parked outside should have apprised him that the place was packed, but it hadn't, and he was surprised at all the customers. How come? he asked George. It wasn't New Year's Eve yet. "They're the gang from Hall & Haley's," George explained. (Hall & Haley's was an electronics company that had recently located in Schmaley.) "They were so busy over Christmas they couldn't take time out for their office party. So they're having it now."

The festive mood was infectious, and Will decided to have one more before picking up his supplies. Maybe he could soak up a little inspiration, latch onto some ideas. He got his eyes on a tall blonde standing at the far wing of the bar. She must have felt him looking at her, because right away she looked back. She smiled. Will ordered another drink.

In the morning he didn't recognize the room. He turned on his side to ask Lela what was wrong. Lela had dyed her hair

blond. She'd also thinned down a little and lost a few years. Not very many, but a few. Horrified, Will slipped out of bed. He found his clothes and dressed in the gray dawnlight. His overcoat was draped over a chair. He put it on. Had he been wearing galoshes? He couldn't remember. Soundlessly he opened the door and stepped into a strange hallway. After walking its length, he came to a flight of stairs and descended them. It wasn't until he reached the street and saw the building from the outside that he recognized it. It was the Hotel Schmaley. His LTD was parked at the curb, directly before the entrance. It was the only car on the street and it stood out like a sore thumb. Fortunately, there were no passers-by. He became aware of how cold it was: his fingers went dead white when he gripped the door handle. He got in, found his keys above the sunvisor and started her up. The steering wheel sent sharp shards of cold into the palms of his hands. God God! — didn't he have gloves? At length he found a pair in his overcoat pocket and put them on. After checking to see whether anyone was coming, he U-turned and headed for home. Then he remembered that he couldn't go home — not at this hour, not looking like this; sick, half dead, ridden with palpable guilt. He rolled down the window to

clear his mind. The LTD fishtailed and he realized — remembered — how icy the road was. He needed a drink — he'd never make it without one. Abruptly a photograph appeared on his retinal screen. It showed an overcoated man emerging from a liquor store cradling a brown paper bag in his left arm. Not good enough — he had to do better than that. Maybe it wasn't a photograph, maybe it was one of a series of frames. Maybe the projector was jammed. He seized it with desperate mental fingers and shook it. He shook it again, harder. Abruptly it started up and the overcoated man emerged the rest of the way out of the liquor store, crossed the sidewalk to a familiar car parked at the curb and cached the bag in the glove compartment. Will braked, forgetting the condition of the road, and the LTD turned almost completely around. Happily, no cars were coming. Pulling onto the snowy shoulder, he opened the glove compartment. The bag was still there. He tore it apart with gloved, half-frozen hands, revealing an unopened fifth of Seagram's Seven. He unscrewed the cap and took a long pull. Another. A fit of shuddering seized him; after it subsided he leaned the fifth against his right hip and pulled back onto the highway. He crept along at 15 mph, elaborately making room for the occasional

cars he met. Gradually the gray crepuscular light acquired a pinkish tinge. He had things pretty well figured out by this time. He would tell Lela that he'd come home drunk around midnight and fallen asleep in the car, but first he would have to get into the garage without her hearing him. When he came to the house, he eased into the driveway, praying that the creaking of the hard-packed snow beneath the treads wouldn't betray him. The garage door rolled back dutifully; he drove in and closed it behind him. He expelled his breath. It was dark in the garage, and cold. Tomb-cold. He turned the car heater all the way up, but he didn't close the window. He took another long pull of Seagram's, thought back to last night, to the blonde; he could remember picking her up now, but he couldn't remember her name, couldn't even remember whether she'd been a good lay. He giggled, leaned his head back against the headrest. He couldn't go in yet; he had to wait till Lela came out and found him fast asleep, otherwise she'd suspect the truth. He took another pull and closed his eyes, the motor purring soporifically under the hood, heat from the heater escaping through the open window and intermingling with the fumes from the exhaust. (Should he close the window? he wondered. No, it would take longer

that way.) He stirred on the seat, half opened his eyes; there was still time to flee the gathering darkness, still time to escape into the arms of the bright new day. He made a half-hearted effort to straighten up on the seat, then fell back exhausted and closed his eyes again. He was wise to bright new days — they were merely yesterdays made up to look like tomorrows: old whores dressed in young girls' clothing. Lies. *All my life I've lived on lies*, he thought, *the ones I fed myself and the ones fed to me by the world. I lie here gorged with lies: Here lies Will —*

He laughs: it is my cue. Black-cowled, I leave the wings and step upon the darkened stage. I pause briefly above this poor sad mortal with the soul of a poet and the calloused palms of a day laborer; then, kneeling, I gently kiss his cheek.

Will's literary remains comprise twenty-two short stories (unfinished), one television script (also unfinished), and a novel that consists of a completed first chapter and part of the opening sentence of a second. The last was written when he was quite young and can be construed as an attempt — the only one he ever made — at realism. Its literary merits may be dubious, but it is fatidic to an uncanny degree.

It follows verbatim:

The Hollow Man

Chapter I

He could remember the shopmen walking home with black dinner buckets in blue winter twilights and nooning in the sun on street corners near the Shop when the first spring days came round; he could remember them in summer too, carrying the same eternal black buckets, home in the long light evenings and to work in the first grayness of dawn; in summer and in autumn, with the leaves drifting down, and the trees they never saw turning red and gold and russet, and then the first winds coming in over the town from the flatlands in the west, and the first flakes of falling snow sifting sporadically out of graying skies. He could remember them and their eternal black buckets, and he hated them: the dull men, the unimaginative men, the robot men; the clay men who bought their houses on time and saved money for dubious tomorrows because they were afraid to live today.

It was impossible to remember them without remembering the bars they stopped in Friday nights when they got their pay: dingy Connor's Grill just across the street from the employee's entrance; the rundown taproom of the Hotel

Ashton; Fred Bartow's Bar & Grill just up the street, with its pot-bellied iron stove, its smell of stale beer and rotten hamburg and rancid fish-fry grease. The milieus for the brief moments when they murdered the reality that clung to their shoulders like a gray leech, when they pretended that life for them wasn't always going to be a time clock punched in the morning and a time clock punched afternoons; a couple of beers with the boys on Friday nights; the back yard garden in spring; a pipe on the front porch in summer and raking leaves in fall —

He could remember these timeclock men, these card-punchers; these Friday night shot-and-a-beer men; these kitchen-garden enthusiasts who couldn't wait for spring, and yet who, when spring came, spent it the same way they had spent winter: over lathes and grinders; in ill-ventilated paint rooms; in foundries, by hot cupolas. These timeclock, card-punching men walking around dead and not knowing it; dead before they were thirty; zombies, walking, working, spading, raking, carrying dinner buckets back and forth to work. . . . And he could remember himself saying, "Never. Not for me. I'd rather be dead than carry a black bucket every day, back and forth, back and forth, back and forth to work; two

sandwiches, a dill pickle and a slice of apple pie. Not for me. Never."

Not for him. Ever.

Darkness came early in the street between the Shop and Connor's Grill. Even in spring, it came early. It lent the illusion that, even when you drank only one beer, you were tying on a good one before taking your pay home. It was gloomy in Connor's — it was always gloomy in Connor's — and the gloom mingled with the tobacco smoke and became a sort of dirty murk, a murk in which dull men talked and sometimes showed off how much money they had in their pay envelopes.

He knew how much money he had in his. All of it, less the dime he'd laid down for the beer he'd been sipping while remembering. He didn't want to show it off. Not even with the overtime included; he was ashamed to show it off. And yet

he knew that if he got drunk he would show it off, become just like the rest of them, the shopmen, the cardpunchers; and then he'd go home, drunk till the moment he stepped in the house and then, suddenly, terribly sober, ready to cry because he couldn't dress up and go out on the town and stand on the corner like he used to and brag about how you'd never see *him* lugging a black dinner bucket back and forth every day, back and forth, back and forth, back and forth to work.

Not him. Ever.

He finished his beer and started for the door. "Hey, Pete," the bartender called after him, "you forgot your bucket."

He stopped, his hand resting on the knob of the door. Then, meekly, he went back and got it.

Chapter II

It was raining when the



TO THE TOP

In the first half of February, 1976, I was on the Queen Elizabeth 2, taking a Caribbean cruise with my wife, Janet.*

We had a table for two in one of the dining rooms (where, it seems to me as I think back upon it, we spent most of our time); and to our left was another table for two, at which there sat a very pleasant Austrian and his equally pleasant young daughter. This was delightful, because it gave me a chance to practice my well-known suave approach to young women *in German*.

The Austrian, who spoke English, talked constantly of the delights of his native province of Carinthia (which he called Kärnten, for some reason, but I was too polite to correct him) and of Vienna. He spoke very convincingly, too, so that while I did not feel impelled to go to Carinthia, since I do not like to travel, I caught myself wishing someone would bring Carinthia to New York.

In particular, whenever some Continental item was on the menu

**No, I was not taking a vacation. I gave two talks on the ship, a third on the island of Barbados, and I wrote two stories long-hand.*

ISAAC ASIMOV

Science



(which was, of course, fabulous, to the delight and distress of my waistline) he would order it, taste it, give his head a good-natured shake and say, "We do it better in Austria." It got so that I could tell exactly when he was going to say it and would say it with him, and we would both laugh.

As it happened, he was a great traveller, and he was shocked at discovering that I had enough money to travel wherever and whenever I pleased, yet chose not to do so. He undertook to lure me into it by describing the wonders he had seen, and, in particular, he waxed poetic over the Grand Canyon. When he ran out of English, he switched to German and continued.

"It sounds as though you liked the Grand Canyon," I said.

"Liked it?" he said, "It was magnificent, an incredible sight!"

And without as much as a facial twitch, I said gravely, "But you do it better in Austria, right?"

"Well, no," he said. *But he hesitated.*

There's nothing wrong with a bit of local pride, however. I've got it myself. I'm actually very fond of the United States, and that's why when I started out to write an article on the climb of the United States to world leadership in technology, I find myself lingering over the subject and stretching it out over three articles.

Last month, I carried the United States through the Civil War and pointed out that by then, the nation was well on the road toward technological leadership. It was still a distant second to the established leader, Great Britain, in coal and iron production, but in all respects it was moving up rapidly.

The question is, however, when did people actually come to realize that the United States was going to be the new leader? In a way, there was already a kind of mute awareness of the fact, for Europeans were emigrating to the United States by the millions. Between 1870 and 1890, a hundred thousand a year were coming into the United States even from the British Isles.

In another way, some of the more parochial types, in Great Britain particularly, never got rid of the comic stereotype of the American backwoodsman. Even as late as the 1930s, Agatha Christie, in her mysteries,*

**These, in my opinion, are the best ever written, and I deliberately and consciously imitate them when writing my own mysteries — though I introduce my own improvements, of course, as you will see if you read my recently published MURDER AT THE ABA (Doubleday, 1976).*

would frequently introduce American characters who would always have a first name like Hiram, who would speak in a nasal twang, who would start every other sentence with "I reckon," and who, on the whole, acted as though it were 1840. I used to watch for some indication that one of her Americans chewed tobacco and brought his Black slave with him.

Still, there must have been a turning point, some moment when you can say: "It was at this very time that American technological leadership had to be taken seriously." I have a candidate for that turning point. It has a name, and it has a year.

The name, first. It is Thomas Alva Edison.

Edison was born in Milan, Ohio, on February 11, 1847 and was the son of a Canadian immigrant who was, in turn, descended from an American Tory who had fled to Canada after the Revolutionary War. Edison's life is the classic tale, so beloved by Americans, of the self-made man — of the poor boy who, without schooling or influence, made his way to fame and fortune through hard work and intelligence.

He was a puzzling boy from the start. His curious way of asking questions was taken as an annoying peculiarity by the neighbors. When he made little progress in school, his mother inquired and was told by the schoolteacher that the boy was "addled." His mother, furious, took him out of school. She was in any case concerned for his delicate health and being a schoolteacher by profession herself, could easily supervise his primary education.

Edison turned to books as a supplement. His unusual mind then began to show itself, for he remembered almost everything he read, and he read almost as quickly as he could turn the pages. He devoured nearly everything, though he found Newton's "Principia Mathematica" too much for him — but then he was only twelve years old at the time.

When he began to read books on science, he wanted to set up a chemical laboratory of his own. In order to get money for chemicals and equipment he went to work. At the age of twelve he got a job as a newsboy on a train between Port Huron and Detroit, Michigan. (During the stop at Detroit, he spent his time in the library.)

Selling newspapers wasn't enough for Edison. He bought second-hand printing equipment and began to publish a weekly newspaper of his own, the first newspaper ever to be printed on a train. With his earnings, he set up a chemical laboratory in the baggage car. Unfortunately, a chemical fire started at one time, and he and his equipment were thrown off the train.

In 1862, young Edison, in true Horatio Alger fashion, saw a small boy on the train tracks and, at the risk of his life, snatched him from the path of an oncoming locomotive. The grateful father, who had no money with which to reward the young man, offered to teach Edison telegraphy in return. Edison was eager to learn and quickly became the best and fastest telegrapher in the United States. He earned enough money at his new profession to buy a collection of the writings of Faraday, which solidified his interest in electrical technology.

In 1868, Edison went to Boston as a telegrapher and that year patented his first invention, a device to record votes mechanically. He thought it would speed matters in Congress and that it would be welcomed. A congressman told him, however, that there was no desire to speed proceedings and that sometimes a slow vote was a political necessity. After that, Edison decided never to invent anything unless he was sure it was needed.

In 1869, he went to New York City to find employment. While he was in a broker's office, waiting to be interviewed, a telegraph machine broke down. Everyone present was helpless, but Edison's quick eye saw the component that was out of place. He offered to fix it and did so, and was promptly offered a better job than he had expected to get.

In a few months, he decided to become a professional inventor, beginning with a stock ticker he had devised during his stay in Wall Street. He planned to offer it to the president of a large Wall Street firm and intended to ask \$5,000 for it. As he waited for the interview, however, five thousand seemed to be more and more astronomical and when it was time to talk, he lacked the courage to put the request into words.

"What would you be willing to pay for it?" he quavered.

The Wall Street man said, tentatively, "Forty thousand dollars?"

Edison, still only twenty-three, was in business. He founded the first firm of consulting engineers the world had seen, and for the next six years, he worked in Newark, New Jersey, turning out inventions such as waxpaper and the mimeograph, to say nothing of introducing important improvements in telegraphy. He worked about twenty hours a day, sleeping in catnaps, and developed a group of capable assistants. Somehow he found time to get married.

In 1876, Edison set up a laboratory in Menlo Park, New Jersey. It was to be an "invention factory," and eventually he had as many as eighty competent scientists working for him. It was the beginning of the modern notion of the "research team."

He hoped to be able to produce a new invention every ten days. He didn't fall far short of that, for before he died, he had patented nearly 1300 inventions, a record no other inventor has ever matched. In one four-year stretch, he obtained 300 patents, or one every five days. He was called "The Wizard of Menlo Park" and in his lifetime it was already estimated that his inventions were worth twenty-five billion dollars (1930-type dollars, too), to humanity.

In Menlo Park, he invented the phonograph, which was his own favorite invention.

Then came 1878. If the recognition of the entry of the United States into technological leadership bore the name Edison, it also bore the date 1878. To explain that, let's go back in time.

Before human beings began to fiddle with the Universe, there were three types of light on Earth:

- 1) There was light from the sky: the Sun, the Moon, the planets, the stars, the lightning.
- 2) There was light from living creatures, such as fireflies.
- 3) There was light from spontaneous fires, usually caused when a bolt of lightning struck a tree.

The Sun, however, is absent from the sky an average of twelve hours a day. The Moon is a feeble substitute and is, on the average, absent for half of each night. The other heavenly bodies, the lightning, fireflies — are all insignificant. Forest fires are an absolute danger.

If early hominids slept eight hours a day as we do, they were immobilized, on the average, for one-third of each night, lying in the dark and waiting for the dawn.

Hominids more primitive than *Homo sapiens* learned, however, to tame fire and, eventually, to produce it on demand. In addition to supplying heat and making various new technological advances possible (metallurgy, for instance), fire also made it feasible for human beings to be active an additional four hours a day on the average, lengthening the effective length of life by about 17 percent.

Lighting has remained a vital need of mankind ever since those early prehistoric days, and through all the hundreds of thousands of years — right down to one century ago — human beings produced their needed light by combustion, by burning something.

The best fuel for lighting would be something that would burn slowly and produce as much light, along with the heat, as possible. Ordinary

wood is not ideal for the purpose. Resinous wood is much better and makes good torches.

Animal fat is less common than wood but, ounce for ounce, produces more light more conveniently. From solid fat, candles could be made, with wicks running their full length. A wick can also be floated in liquid oil kept in a container (a "lamp," from a Greek word meaning "to give light").

All these sources of light: bonfires, torches, candles, lamps are of pre-historic origin, and nothing essentially new was added through all of history right down to the 19th Century.

With the 19th Century, the pace of change quickened. Nothing much could be done with wood fires; and coal fires, which now became common, though an improvement as far as heat was concerned, were poorer as light sources. The story was different with fats and oils.

In 1835, the French chemist Michel Eugene Chevreul, who had isolated fatty acids from natural fats and oils, patented a process whereby candles could be made from those fatty acids. Such candles were harder than earlier candles, burned more slowly and brightly, and gave off considerably less odor.

As for liquid fuels, whale oil turned out to be particularly useful in lamps, thus contributing an impetus toward the remorseless slaughter of these largely inoffensive sea-creatures. That was later supplemented by kerosene, which was obtained from petroleum.

The great advance in lighting of the early 19th Century was, however, the introduction of gas lighting. Gases had the potential of burning more clearly and less smokily than either solids or liquids. They could be led by pipes to the point desired from some central storage place and the amount of light produced could be more easily regulated than was true for liquid or solid fuels.

The first public use of gas for lighting was in Paris in 1801. It was arranged by a French chemist, Philippe Lebon, who got the gas for the purpose by heating wood in the absence of air ("destructive distillation"). He had been experimenting with gas lighting since 1797, worked out much of the engineering requirements and foresaw all the applications thereof. France, however, was in the midst of the Napoleonic wars at the time, and Lebon himself died in 1804, so the lead in gas lighting passed to Great Britain.

There, the Scottish inventor William Murdock was also working on gas lighting. He got his inflammable gas from the destructive distillation

of coal. He put up his first public display of gas lighting in 1802 to celebrate the temporary peace of Amiens with Napoleon. In 1803, he was routinely lighting his main factory with gas jets, and in 1807 some London streets began to use gas lighting.

By 1825, gas lighting had grown common in the public buildings of London and in the factories and shops as well, but for years the flames were sooty and smelly. It wasn't until methods for introducing air into the gas tube just before burning were worked out that the flame became clean and non-odorous. This took place about 1840. (In 1855, the German chemist Robert Wilhelm Bunsen devised a simple version of such a gas jet for laboratory use, and this "Bunsen burner" has been enormously useful in the chemistry laboratory ever since.)

By the 1870s, then, gas lighting was the chosen method of illuminating the streets and homes of the cities and towns of the more advanced nations.

Like all other methods of lighting, however, from the original wood fire, the gas jet involved an open flame. Indeed as long as light was obtained from combustion, an open flame would seem a necessity since oxygen from the air had to reach the burning fuel and the carbon dioxide produced had to leave.

The open flame had been with mankind for half a million years, then, and it was dangerous. Who can count how many times that barely controlled flame went out of control, burning down wooden houses and wooden cities, and destroying flesh-and-blood human beings in agony.

What's more, open flames were generally dim (by modern standards) and invariably flickery. Reading by any sort of open flame, or doing any fine work by it, must surely have been very tiring in view of the constant shifting and bellying of shadows.

But how can you have light without an open flame? How can you have light without combustion?

The first indication that such a thing was possible arose from an observation of sparks from static electricity devices.* Making use of batteries to produce a constant electric current, one could set up a permanent electric spark between two carbon electrodes. The electrical engineer, W. E. Staite, experimented for years with such "arc lights" and, beginning in 1846, gave impressive public demonstrations of their use.

The arc light was far brighter than an ordinary flame. To be sure, it

*See *THE FATEFUL LIGHTNING*, June, 1969.

was just as hot and just as fire-provoking as a flame, but it didn't require air to maintain itself or to carry away wastes, so it could be enclosed in a glass container. However, the spark flickered even more than a flame did and it was hard to regulate.

One way of getting the electrically produced light to remain steady, was to run an electric current through a wire of very high-melting metal, and let the wire heat to incandescence. The wire would not flicker but would remain in place, and so would the light. Unfortunately, at those high temperatures, the metal will burn. Even the high-melting and inert metal, platinum, will slowly combine with oxygen and break, so that such an "incandescent light" would only last a short time.

The obvious trick, then, was to enclose the glowing wire in an evacuated glass container. Then there would be no oxygen for the metal of the wire to combine with. It is easy, however, to *talk* about an evacuated glass container; producing one with a good enough vacuum is a lot harder.

From 1820 on, inventors (mostly in Great Britain) tried to produce what we would now call an electric light bulb. The most nearly successful experimenter in this direction was the English physicist, Joseph Wilson Swan. He was the first to see clearly that even if he could produce a practical light bulb with a platinum filament, it would end up being too expensive for mass use. It occurred to him that carbon was as high melting as platinum and might substitute for it.

Of course, carbon isn't a metal and can't be drawn into wires as metal can. In 1848, however, Swan began to use thin strips of carbonized paper within an evacuated glass bulb. For nearly thirty years he kept fiddling with this and improving his design, but always he was defeated by one thing — the vacuum in the bulb was never good enough and after glowing briefly, the carbon filament he used burned, broke and went dark. (So did platinum filaments.)

By 1878, then, inventors had been working on the electric light bulb for over half a century and had gotten nowhere. And then, in that year, Thomas Alva Edison, the Wizard of Menlo Park, announced that *he* would try.

And on that bare announcement, illuminating-gas stocks tumbled on the stock markets of New York — and of London, too! Faith in the young man (he was only 31) was absolute!

It's my feeling that the moment those stocks fell, there was a clearcut indication that the investing community of Great Britain was taking American technology seriously, and that was the moment you might

suppose that the clear suspicion arose that world leadership in technology was crossing the Atlantic.

Nor did Edison disappoint the world. By that time the art of preparing an evacuated bulb had reached the point where an electric light was possible, and it remained to find the proper filament. Apparently, Edison was not thoroughly aware of Swan's work, for it took him a year of experimentation, and \$50,000, to find that platinum wires wouldn't do, and to turn to a scorched cotton thread.

On October 21, 1879, Edison set up a bulb with such a carbon filament that burned for forty continuous hours. The electric light was at last a reality, and it received patent number 222,898. On the next New Year's Eve, the main street of Menlo Park was illuminated by electricity in a public demonstration which three thousand people (mostly from New York City) watched.

In order to make the electric light commercial, Edison had to develop an electric generating system that would supply electricity when needed and in varying amounts, as lights were switched on and off. This required more ingenuity by far than the electric light itself, but by 1881 Edison had built such a generating station and within a year he was supplying about 400 outlets divided among 85 customers.

Meanwhile, Swan had independently produced workable electric light bulbs, and the House of Commons was lit by electricity in 1881. Edison and Swan settled differences among themselves and formed a joint company in Great Britain in 1883.

I don't have to emphasize what electric lighting has done for the problem of illumination in the last century, and how unendurable it would be to go back to the open flame. For one thing, consider how, despite the possibility of defective wiring, the danger of fire has been enormously decreased by the use of enclosed sources of light and by the elimination of open flames.

Of course, accidental fires continue because the open flame has not been entirely abolished. There are still open flames in gas stoves, furnaces, and internal combustion engines. Most of all there is the open flame that hundreds of millions of people the world over carry about with them at all times — the smoldering cigarette-end and its accompaniment, the smoldering match. *There* is the true villain!

Of course, you might argue that Edison's announcement and the accompanying stock-tumble didn't indicate a recognition of American technological mastery at all — just Edison's.

That, however, is not so. Edison just happened to be the best and most glamorous example of what was going on in the United States, but he was by no means an isolated example. He was the leader of a large pack, and in the glare of his genius American technology shone brilliantly from sea to shining sea.

The virtual conflagration of technology that was going on in the United States in the last half of the 19th Century was fed by the nation's free immigration policy, too, for from all over Europe brains as well as hands were pouring into the country.

It was a Swedish immigrant, John Ericsson, who built the ironclad *Monitor* in 1861, and made every other warship in the world obsolete. It was a Scottish immigrant, Alexander Graham Bell, who invented the telephone in 1876. The German immigrant, Charles Proteus Steinmetz, and the Serbian immigrant, Nikola Tesla, advanced electrical theory and practice to an even greater extent than Edison did.

Then came 1898, which saw a demonstration of the effect of American technology in a way that left nothing to the imagination.

In that year, the United States went to war with Spain. It was a manufactured war, and Spain wasn't much of an enemy. Even so, the American army was so small and so miserably mishandled that had the enemy been less incredibly inept than the Spanish forces in Cuba were, the United States would have ended up terribly embarrassed.

At sea, things were different. The American Navy was small compared to the British navy, but it was newly-built and its ships were as technologically advanced as the Americans could make them. The Assistant Secretary of the Navy, Theodore Roosevelt, had, in the absence of his superior, prepared for war by ordering six warships under Commodore George Dewey to Hong Kong where they would be ready to swoop on the Spanish fleet in the Spanish-owned Philippine Islands.

The war began on April 24, 1898, and as soon as the news of that reached Dewey, he sailed for Manila with his six ships. Waiting for him were ten Spanish ships and Spanish shore batteries, and the British in Hong Kong were sure he was sailing to his destruction.

At day-break on May 1, 1898, the battle of Manila Bay began, and in seven hours every Spanish ship had been sunk or beached, and 381 Spaniards had been killed. No American ship suffered any significant damage, no American was killed, and only eight American sailors received minor wounds.

Meanwhile in Cuba another Spanish fleet was bottled up by another American fleet. On July 3, the Spanish fleet tried to make a run for it, and the American ships pounced. In four hours, every Spanish ship was destroyed, with the loss of 474 Spaniards killed and wounded, and 1750 taken prisoner. No American ships were significantly damaged, one American was killed, one wounded.

That the United States had won the war was not too surprising, but those naval victories were to the last degree impressive. Two naval battles had been fought, more or less simultaneously, on opposite sides of the world, and both had been ridiculously lopsided.

This could not be put down to the fact that the Spaniards could not fight, for military history has shown that Spaniards have consistently fought like demons under all conditions. Nor did Spain lack a naval tradition. For four centuries they had had a significant navy.

No, it was just this! In the last half of the 19th Century, the art of naval construction had undergone enormous technological strides. No nation that was not technologically advanced could any longer fight a sea-battle against one that *was* technologically advanced and as much as inflict a scratch on its enemy.

The United States had now demonstrated even to the very dense minds of the military establishments of the world that it was technologically advanced, and with the Spanish-American War, it became a member of that dangerous group of nations known as "the Great Powers."

It was Great Britain's action that was most significant. Even as the United States was fighting Spain, Great Britain was using its unpracticed army to fight the Boers and was being handed humiliating defeats. It took Great Britain three years to win that war, and in the process she came to realize that the whole world sympathized with the Boers.

In particular, Germany made no secret of its delight at British troubles and it was beginning to build an advanced navy of its own. Combine this with Germany's army — the best in the world — and it was clear that Great Britain's domination of the world was in jeopardy.

But throughout the 19th Century, Great Britain and the United States had been "traditional enemies" and no decade had passed without a war crisis between them. Great Britain now saw that she dared not let the German and American navies combine against her. From 1898 on, therefore, Great Britain never again allowed herself to be annoyed by the United States. Whatever the United States did, Great Britain smiled and nodded.

The result was that the two nations were enemies no longer. Throughout the 20th Century, Great Britain and the United States fought together, through hot wars and cold, against Germany, Japan and the Soviet Union.

You can analyze world events in terms of politics, ideologies, and international diplomacies all you want; my own feeling remains that it all boils down to technology.

IMPORTANT NOTICE TO SUBSCRIBERS ON THE MOVE

If you are planning a change of address please notify us as far in advance as possible, and allow six weeks for the change to become effective.

Be sure to give us both your old and new address, including the zip codes. Print clearly and, if possible, attach an old mailing label.

OLD ADDRESS	
(attach label here if available)	
Name _____	
Address _____	
City _____	
State _____	Zip _____
(please print)	

NEW ADDRESS

Name _____	
Address _____	
City _____	
State _____	Zip _____

SUBSCRIPTION SERVICE,
Mercury Press, Inc., PO Box 56, Cornwall, Ct. 06753

Liz Hufford, who wrote "The Book Learners," (May 1975) returns with what we predict will be a much-reprinted story: a perfect gem of an idea, cleanly and faultlessly executed.

This Offer Expires

by LIZ HUFFORD

The old store on Lesort Street had a sign in the window — TWELVE FOR ONE. It was remarkable that Welby Whaning noticed it. True, Welby passed the store every day, but it was characteristic of his life that he missed a few things. He walked with his head bowed, his shoulders hunched, and his coat held close around his neck. He took only hesitant glances at the world around him.

But even if Welby had been exceptionally alert, it would have been remarkable that he saw the sign. There were so many of them. Soft-drink advertisements, cigarette signs, and specials-of-the-week covered the two large windows of the store. Even the narrow glass door was placarded. The new sign was small and it sat in the left window. Still, one thing Welby tried never to overlook was a bargain.

What could one buy twelve for a dollar anymore? He pondered the sign as he passed. Only the appearance of the store prevented him from inquiring immediately. The store was grimy and dim. Though he had passed it every workday for twelve years, he had never once thought of entering. He was not at all sure he would want whatever was twelve for a dollar.

It was Friday when Welby Whaning decided to enter the store. The day was fair and still, and Welby's grip on the collar of his coat was relaxed. He had been paid and the check reflected the annual pay hike. It was a day when even Welby could be adventurous.

Twelve for a dollar. He pushed the door open. The uncovered plank floor creaked with his weight as the door closed behind him. He stood still a moment allowing his eyes to adjust to the darkness: the signs permitted only fragmented

rays of sunlight. As soon as his vision cleared, he was mortified. The store was worse than he had imagined. To his left were stacks and racks of comics and lurid magazines, and some of the disgusting things were obviously secondhand. The middle counter displayed all manner of naked maidens, crocodiles, and little boys who protruded anatomically when the attached rubber ball was squeezed. There were playing cards both garish and vulgar and all manner of practical jokes. To the right of the store was a collection of clothing, appliances, and old furniture. In the back were shelves of groceries and a refrigerator. Whatever was twelve for a dollar, Welby was sure he wasn't interested. He turned to leave when a voice inquired, "May I help you?"

Welby was not prepared for the dark, voluptuous woman who faced him.

"No, thank you," he said. "I was just looking."

She smiled, her full lips curling provocatively.

"You seem like you're trying to avoid looking," she said.

"Oh," he said, laughing nervously and pulling his coat more closely around his neck, "actually I came to inquire about the sign — twelve for a dollar."

"TWELVE FOR ONE," the

woman corrected him. Then she walked to the back of the store.

Welby waited for a moment or two. He expected the woman to return with whatever it was that was twelve for one. The woman did not come. He peered back into the store and saw her sitting by the cash register. She was reading and obviously had no intention of returning. He could have left the shop then, but he did not. Instead he reached for a pack of playing cards. Solitaire. He avoided even touching the nude decks. He walked back to the register and laid the box on the counter.

The woman turned to him. "Will that be all?"

Welby cleared his throat. "The sign — TWELVE FOR ONE?"

"Oh, yes," she said, "it's a special for our preferred customers."

"Oh, I see," he said, "a special for your regulars, eh?"

"I said preferred, not regular," she replied.

Welby was warm and uncomfortable again. He believed she was flirting with him.

The woman placed the cards in a bag, accepted his money, and returned his change.

"Shops down here," she said, "I mean in the center of town, we have to make some allowances." She nodded at the paraphernalia at the front of the store. "Sometimes we

take merchandise if somebody can't pay his bill. We resell what we can, and the rest just sits around here."

"I see," Welby said, "but the twelve for one?"

"Simple," the woman said, "You bring us twelve items and we give you one."

"What?" Welby said.

"Twelve for one," the woman said.

"Why that's obnoxious," Welby said indignantly. "Someone should turn you in to the better business bureau."

The woman returned to her stool and book. Without lifting her eyes she passed Welby a slip of paper.

"It's the number of the better business bureau," she said.

"Huh," Welby said feeling more and more uncomfortable. "Wait a minute, is this some kind of joke?" He waved his arm at the counter of practical jokes. He looked for a hidden camera. He flashed an inane smile.

The woman looked up at him with her slow smile. Welby's warmth began to centralize. He must leave the store.

"See here," he said, pulling a pack of cigarettes from his pocket and counting out twelve. "Here are twelve cigarettes. Twelve for one."

The woman reached inside the low neckline of her dress and pulled

out a cigarette.

"Twelve for one," she said.

Welby was sure he did not want to touch the thing. The woman had a certain attractiveness, but the cigarette, it would have been pressed against her body. Still, he found himself clutching it as he walked down the aisle of the shop.

"Twelve for one," the woman said as the door shut behind him.

What an experience he had had, Welby thought as he emerged from the store. He looked at the cigarette in his hand. What could this be — TWELVE FOR ONE?

He met the bus in front of the park and caught his breath on the ride out to his apartment. As he relaxed against the bus seat, he examined the cigarette. A thought occurred to him. Dope. He had read about this drug thing. Surely that was it. He had stumbled upon their code and gotten himself a marijuana cigarette. Or what was it they called it? A reefer. He thrust it into his pocket. If he was right, it wasn't wise to examine it on the bus. He would wait until he reached the apartment.

Welby slowly turned the cigarette. There was no trademark, but the tobacco and paper looked conventional. There was one way to find out. He had already locked and bolted the apartment door. He took the cigarette and a pack of matches into the bathroom. He sat

on the closed toilet and pushed the door to. Then he locked it. With trembling hands he lighted the cigarette. He had some difficulty, as he was afraid to inhale. Once it was lit, he forced himself to take a substantial puff. It was marvelous. A well-defined but mild flavor, a wonderful aroma. He took another drag. He was very relaxed. The room became pastel; his vision came in swirls. He quickly put the cigarette out.

It was a narcotic: he had happened on the underground. The idea both terrified and delighted him. But why would they give him dope for twelve cigarettes? It became clear in an instant. They meant to addict him. Later they would charge him exorbitant prices to maintain his habit. He looked at the cigarette; he hoped no harm had been done. He waited to see if he was able to resist the cigarette. Though he felt no need to relight it, neither did he wish to part with it. He thought of the dark woman and her dark plan for him.

On Monday morning Welby regretfully passed the store. It could wait, he thought, it could wait until afternoon. Still, he was eager to confront the woman with his knowledge of her scheme.

The day was tedious. When the clock finally read 4:00, Welby sprinted from the office. When he reached the store, he walked boldly

in. The woman was sitting on the stool by the register. The heels of her shoes were hooked on the spindles of the stool; her legs were wide apart.

Welby took a deep breath and moved toward her.

"I know what your game is," he confided masterfully.

The woman looked up. The black matt of her hair fell back to reveal her face. Her unnerving sullen smile flashed at him.

"Then you're the first," she said. She bent back to her reading.

Welby pulled out the cigarette, carefully wrapped in a white hanky.

"I know what this is. I know what you're doing here," he said.

"Another question I've never been able to answer myself," the woman replied. This time she didn't even look up.

"I have to tell the police," Welby said nervously. "There may be a reward."

The girl handed him a slip of paper.

"It's the number," she said.

Welby stood with the paper in his hand, shifting his weight from one foot to the other.

"This is a narcotic," he said unwrapping the cigarette and waving it before her eyes. "I cannot fail to report this to the proper authorities."

"Let me save you the trouble, mister," she said. "That stuff won't

test for anything."

"It's not narcotic?" he asked.

"You liked it, huh?" she said.

"It doesn't matter if I did or didn't. Anyway," he said, "if it's not illegal I'm keeping it."

He resolutely stuffed the cigarette back into his jacket. The woman was still looking at him.

"Well," he said, "as long as I'm here, what have you got today?"

"What have you got?" she said. She had an unsettling way of asking questions.

"What have I got?" he said to himself, patting his pockets.

"Twelve for one, eh?" Change. He dug into his pockets and produced twelve pennies. "Not that I'm a hoarder," he said. He had two coffee cans of pennies at home.

"Twelve for one," the woman smiled.

This time she reached into her shoe and pulled out a penny. She placed it in his hand and returned to her reading.

"Oh, I see," Welby said. "I get one of whatever I give you."

"Looks like it," she said.

"Is it any good?" Welby asked, referring to her book.

"I don't get time to find out," she said.

Welby turned and walked toward the door.

"Twelve for one," a voice called from the back of the store. He nodded and pushed open the door.

Well, what have we here, thought Welby, turning the penny in his hand? He could scarcely imagine that it was a narcotic. He wiped it against his coat and tried to bend it in his hands. Maybe it's a new penny, he thought. But it was not. 1955.

Welby reached the park and caught his bus. Somehow he felt no safer examining the penny on the bus than he had the cigarette. He pushed the coin deep in his pocket. It felt warm against his leg.

When he reached the apartment, he hung up his outer garments, fixed a cup of coffee, and retired to his reclining chair. He drew the cigarette from his jacket pocket. Tonight he would smoke the rest of it. It was as delightful and, therefore, as frightening as he remembered. But this time he smoked it all, surrendering himself to the experience. As the pastel, swirling world opened and closed around him, he dug out the penny from his pocket and wiped it off again. Then he held it to the light. It was a misprint; there was a double image of Lincoln. Welby looked around the room. There were double images of many things. It's the cigarette, he thought, as he dozed off.

Welby overslept the next morning. He hurried through his morning routine to catch the bus. Only then did he look at the penny

again. It was still a double print. At lunchtime he looked in the yellow pages for the nearest coin dealer and took a taxi to the address. The man looked at the coin through a magnifying glass and offered him a hundred dollars. Welby declined the offer. He wished he hadn't smoked the cigarette.

Welby returned to work, but his mind was elsewhere. What was happening to him? He gave the woman twelve cigarettes and she gave him one marvelous one. He gave her twelve pennies and she gave him a valuable coin. Welby saw a pattern; he was that kind of incisive thinker.

But then Welby was thirty-eight years old. He had spent his life waiting for his big break. It had never come, or, more likely, he had failed to notice it. Welby was determined to profit from this experience.

Immediately after work he hurried to the store. The door was locked. He knocked loudly, but to no avail. The store was closed.

That night he sat in his apartment deliberating his next action. He could continue taking coins, of course. That would supplement his income handsomely. But Welby wanted to maximize the opportunity. He thought of taking cheap abstract paintings and receiving a Picasso. He thought of taking costume jewelry and

receiving a glittering diamond. He thought of buying some junked cars and returning with a Rolls.

He took the early bus the next day, but the store was not yet open. All morning he sat at his desk realizing with disgust how odious his employment was. At lunchtime he tried the store again with no success. For the first time he feigned illness and left the office at two thirty. He sat on the store step until 7:00 but no one came. When he stood up to catch the last bus, he noticed that the sign was gone.

Lost opportunities were not uncommon to Welby. Though this one hit him hard, he came to accept it. He inquired as to the owners and the closing, but he found no answers. He passed the store twice each day, and after a while he didn't try the door anymore. But he refused to part with the twelve imitation diamonds which he carried in his coat pocket. When his coat wore thin around the collar, he ordered a new one. Into it he transferred the jewels. It was this coat that felt heavy on Welby's shoulders as he walked from the office one spring afternoon.

The store on Lesort Street looked different. For a moment Welby couldn't figure out why. Then his heart leapt to his throat; the sign was up. Welby felt for the jewels in his pocket. Trembling, he pushed open the door. He strained

his eyes to see in the dim interior. It was just the same: dirty magazines, stupid gags, junk, and groceries. And in the back the woman sat on her stool. Welby moved toward her. When she saw him she smiled, rose, and disappeared out a door in the back. It was then Welby tripped over the other man.

He was a short fat man wearing a plaid jacket and plaid pants. Welby pushed him aside as he pursued the woman.

"Twelve for one," Welby called cheerily, "twelve for one."

The woman did not respond. When he reached the door, he tried it, but it held fast. He knocked, but there was no answer.

"I'm going to wait until she comes back," a shrill voice told Welby. Whaning turned, expecting to see the plaid man. Instead he faced a thin, white-faced man in a gray coat.

"See what I've brought," the man continued, pointing to a stack of books nearby. "I'm a book collector. Dear me, but I would love an original Dickens." He looked around hopefully, as if some unseen presence might hear his request.

Welby was at once uncomfortable. He turned and looked about the store. His eyes were now accustomed to the uncertain light. He saw the fat plaid man looking at him. A man in a bow tie bent over the counter of practical jokes.

Welby counted the men in the store. There were eleven of them and himself.

He swallowed hard and drew his coat close around his neck. He took long, determined strides until he reached the front door. He gave it a firm push, but the door held fast. The man by the appliances began laughing. Welby placed his shoulder against the door and pushed with all his weight. It did not weaken. Then he noticed the window: the sign was gone.

He went to the window. Looking out between the signs he saw some passers-by. He pounded on the window to attract their attention. They did not notice him. He was hollering now, and the other men clustered near him. They stood silently holding their books and coins and paintings.

"It doesn't seem to help," the man in the gray coat whispered pathetically.

Welby ignored him. His eye to the glass, he saw a young woman standing by the curb. He screamed at the top of his lungs and flailed his fists against the glass. Finally she saw him. She walked to the window.

"Call the police," he implored. "We'RE LOCKED IN." It was then he recognized her: the woman from the store. She pressed her hand to her lips and then placed it against the windowpane.

It was then that the chauffeured Silvercloud pulled up at the curb. The young man who emerged from it was incredibly handsome. His tailored clothes accentuated a superb physique. In his left hand he

carried a brief case and a bouquet of flowers.

"There you are, love," he said in his deep, well-modulated voice. He took the woman's hand and led her smiling to the car.

Coming next month

27th ANNIVERSARY ALL-STAR ISSUE

New novellas by

- RICHARD COWPER
- R. BRETNOR

New short stories by

- HARLAN ELLISON
- MARION ZIMMER BRADLEY
- MANLEY WADE WELLMAN
- ROBERT BLOCH
- URSULA K. LE GUIN

Plus ISAAC ASIMOV on Science, verse by RAY BRADBURY and more! Don't miss the October anniversary issue, on sale August 31. Or send us the subscription coupon on page 118.

				1	G	2	L			3	S	4	O	5	T	6	D				
7	P	8	E	9	N			10	I	11	N	12	J	13	F	14	A	15	M		
16	G	17	J	18	M			19	H	20	Q	21	S	22	C			23	E	24	J
25	O			26	F	27	S	28	D	29	B			30	E	31	I	32	A		
33	J	34	G	35	K	36	I			37	E	38	W	39	A			40	E	41	V
42	N	43	U	44	B	45	M			46	U	47	O	48	G			49	I	50	N
51	T	52	Q			53	D	54	A	55	L	56	I	57	N	58	K	59	X	60	W
61	Z	62	M	63	G			64	K	65	D	66	B	67	U	68	A	69	Q	70	G
71	Z	72	R			73	Y	74	•	75	O			76	Q	77	O	78	E	79	Z
80	V			81	E	82	F	83	P	84	W	85	H	86	R	87	U			88	X
89	E			90	E	91	P	92	V	93	W			94	O	95	F	96	I	97	D
98	X	99	A	100	Q			101	I	102	F	103	P	104	Z	105	L	106	H		
107	Y	108	N			109	O	110	C			111	W	112	O	113	X			114	U
115	T	116	R	117	Q	118	B	119	L			120	H	121	L	122	B			123	M
124	Z			125	L	126	R	127	H			128	E	129	F	130	Q	131	O	132	D
		133	U	134	P	135	V	136	W	137	E	138	R	139	T						

Acrostic Puzzle

by Georgia F. Adams

This puzzle contains a quotation from a work of science fiction. First, guess as many of the clues as you can and write the word or words in the numbered blanks in the puzzle. (The end of a line in the diagram doesn't mean the end of a word.) If you have answered the clues correctly, you will see words forming in the puzzle blacks. Fill in the missing letters and put them in the numbered spaces opposite the clues. That will help you guess those words and therefore get more of the puzzle, and so on. The first letters of the correctly answered clues will spell out the name of the author and the title of the work from which the quotation is taken.

- | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|
| A. Protagonist of <i>Caves of Steel</i> was ane | 32 | 14 | 39 | 54 | 68 | 99 | | | | | |
| B. Shooting Star | 122 | 118 | 19 | 44 | 29 | 66 | | | | | |
| C. A necessity for Wilson | 109 | 112 | 22 | | | | | | | | |
| D. Recent winner of John W. Campbell Best New Writer Award | 28 | 97 | 132 | 65 | 53 | 6 | | | | | |
| E. Novella that tied for Nebula in 1965 | 30 | 8 | 128 | 23 | 89 | 37 | 40 | 78 | 90 | 137 | 81 |
| F. Taward that place | 13 | 7 | 26 | 82 | 95 | 102 | 129 | | | | |
| G. Creator of Jason dinAlt (First name and last initial) | 1 | 16 | 34 | 48 | 63 | 70 | | | | | |
| H. Believed by the ancients to fill the upper regions of space | 74 | 85 | 120 | 127 | 106 | | | | | | |
| I. Phase of heavenly body | 10 | 31 | 49 | 101 | 96 | 56 | 36 | | | | |
| J. Author of "Dragonrider" | 33 | 12 | 17 | 24 | | | | | | | |
| K. Swords in the _____ | 35 | 58 | 64 | 88 | | | | | | | |
| L. Left the stage | 2 | 55 | 121 | 125 | 105 | 119 | | | | | |
| M. Strangely | 123 | 18 | 45 | 62 | 15 | | | | | | |
| N. Savage oficianada | 108 | 50 | 57 | 42 | 11 | 9 | | | | | |
| O. Winner of recent Hugo for his art | 25 | 4 | 94 | 131 | 77 | 47 | 75 | | | | |
| P. We never mention this relative, according to 1958 Pohl | 83 | 91 | 134 | 103 | | | | | | | |
| Q. "'Repent, Harlequin,' said the _____ man." | 100 | 130 | 76 | 52 | 110 | 20 | 69 | 117 | | | |
| R. Suffered pain | 138 | 116 | 126 | 86 | 72 | | | | | | |

S. "At this point in time."	<u>27</u>	<u>21</u>	<u>3</u>			
T. <i>The Zep Gun</i> author	<u>139</u>	<u>115</u>	<u>51</u>	<u>5</u>		
U. Believed by the ancient Greeks to be the center of the Earth-site of Oracle of Apollo	<u>87</u>	<u>67</u>	<u>114</u>	<u>43</u>	<u>46</u>	<u>133</u>
V. Creator of a sexual onamoly	<u>92</u>	<u>41</u>	<u>80</u>	<u>135</u>		
W. In 1945 predicted communications satellites	<u>111</u>	<u>93</u>	<u>136</u>	<u>38</u>	<u>60</u>	<u>84</u>
X. Asimov won a Nebulo for a novel about them (sing.)	<u>98</u>	<u>59</u>	<u>113</u>			
Y. Exclamation	<u>107</u>	<u>73</u>				
Z. Capek's creatures	<u>124</u>	<u>71</u>	<u>79</u>	<u>104</u>	<u>61</u>	

Coming in the November F&SF

A special Damon Knight issue, featuring:

- "I See You," a brand-new story by DAMON KNIGHT
- A profile and critical appreciation by THEODORE STURGEON
- A Knight bibliography
- Special cover by Ed Emsh

Don't miss the November issue, on sale October 5. Or send us the subscription coupon on page 118.

Fantasy and Science Fiction

MARKET PLACE

BOOKS-MAGAZINES

SCIENTIFANTASY specialists: Books, magazines, Free catalog. Gerry de la Ree, 7 Cedarwood, Saddle River, N.J. 07548.

SPECIALISTS: Science Fiction, fantasy, Weird Fiction, Books, Pocketbooks, Lists issued. Stephen's Book Service, Post Office Box 321, Kings Park, L.I., New York 11754.

Send for Free catalog of hardcover science fiction and fantasy books and pulps. Canford Book Corral, Box 216, Freeville, N.Y. 13068.

SF, Fantasy magazines, books, paperbacks. Catalog free. Collections also purchased. Robert Madle, 4406 Bestor Drive, Rockville, Md. 20853.

SF-Fantasy books for sale. Free lists. Gordon Barber, 35 Minneapolis Ave., Duluth, Mn. 55803.

THE FANTASY COLLECTOR, free sample of monthly publication for collectors of Science Fiction books. Fantasy pulps, Artwork, etc. Since 1958. Write: Box 507, St. Francisville, La. 70775.

Buy, sell, trade, 10,000 science fiction, Arkham House, hardcover, paperbacks, pulps. Two free catalogs per year. Want lists preferred. Graham Holroyd, 290 Driving Park, Rochester, N.Y. 14613.

WANTED TO BUY - science fiction magazines from 1926 to 1960. Harry Bennett, 6763 Hollywood Blvd., Hollywood, Calif. 90028.

SF, FANTASY BOOK SEARCH. Send titles — we'll look. SPQR Books, Box 863, Middletown, Ct. 06457.

Read, SCI-FI paperbacks, 44¢ each. Free details! PMLOV, FSF 9-6, Route 2-290, King, North Carolina 27021.

For 20 years THE Conan fanzine. 5 consecutive back issues plus next 5 published: \$6.50. Amra, Box 8243, Philadelphia, Pa. 19101.

COMPLETE SF-FANTASY-HORROR catalog. Large selection new publications. Collector's Editions, Box 236, Vienna, Maryland 21869.

FOREIGN EDITIONS of Fantasy and Science Fiction. Copies of French, German, Portuguese, Japanese and Swedish editions available at \$1.00 each, three for \$2.00. Mercury Press, Box 56, Cornwall, Conn. 06753.

LOVECRAFT, HOWARD, Fantasy, Horror, Books, Fanzines. Free catalog. Weinberg, 10533 Kenneth, Oaklawn, Ill. 60453.

BACK ISSUE MAGAZINES. Over 200 titles, 1890 to 1976. Send stamped envelope. Free List. Everybody's Bookshop, Dept. FS, 317 West 6th, Los Angeles, Calif. 90014.

THE IMMORTALIST, newsletter of Cryonics Society of Michigan, publishes news of all medical and social advances relating to cryonics and immortality. Send \$3.75 for five month trial subscription. CSM, Dept. A, 515 W. Briar Place, #704, Chicago, Illinois 60657.

SF Fanzine-Premonitions 50¢. Graham Zaretsky, 80 Southgate Drive, Spring Valley, NY 10977.

THRUST SF MAGAZINE: Brunner, Zelazny, Pohl, Laumer, 4/\$2, 1810 Metzertott #14, Adelphi, Maryland 20783.

SF NEWSPAPER - 4/\$1. 220 Standish #1, Redwood, Ca. 94063.

LARGE Catalog Free! Science Fiction and Mystery books. Save to 70%. Spencer Book, P.O. Box 186, So. Laguna, Ca. 92677.

BUYING: All Titles, Pulp Magazines, Arkham House, Fantasy Press, First Edition Hardcover, Paperbacks. Bookclubs, Midnight Book Company, 1547 East 21st Street, Brooklyn, NY 11210.

40 page catalog Arkham, Burroughs, Mirage Press Science Fiction, Pulps, Paperbacks, Comics. Send 50¢. Passaic Book Center, 594 Main Avenue, Passaic, N.J. 07055.

Do you have something to advertise to sf readers? Books, magazines, typewriters, telescopes, computers, space-drives, or misc. Use the F&SF Market Place at these low, low rates: \$4.00 for minimum of ten (10) words, plus 40 cents for each additional word. Send copy and remittance to: Adv. Dept., Fantasy and Science Fiction, P.O. Box 56, Cornwall, Conn. 06753.

SELL Your used F&SF books. Details, Write: Box 1216, Corona-Elmhurst, N.Y. 11373.

AMERICAN ATHEIST magazine. Send \$1 to S.O.S., P.O. Box 2117, Austin, Texas 78767.

UFOs - ANCIENT ASTRONAUTS? \$1.00. Mystery-ology Magazine, Box 6221-CH, Burbank, CA 91510.

UNCOMMON SF, Fantasy. Hardbound books, Pulp Magazines. Free Lists. Haunted Bookshop, 18 Keller St., Valley Stream, N.Y. 11580.

"**GOOD TASTE**" is a new story by Isaac Asimov, published in a very limited, signed and numbered edition. We also have Firesign Theatre, Harlan Ellison, others too! Send stamp for details. Apocalypse Press, P.O. Box 1821, Topeka, Kansas 66601.

CHESS

POSTAL CHESS CLUB. Opponent - \$1.50. Tournament - \$5.00. Magazine - 75¢. Ratings given. Chessology, Box 6221-CF, Burbank, CA 91510.

CLOTHING

STAR TREK T-SHIRT. Classic Enterprise-full color quality screen printed. Specify white or blue shirt-s-m-lg-xlg. \$4.50 check or M.O. Arcona, 404 Quarry St., Quincy, Mass. 02169.

CLUBS

ALIENS: Celebrate the BicentTentacle - join The American Tentacle Society! \$2 brings you amazing button, membership card & info, plus new relativistic interstellar propulsion system design. Tentacle, PO Box 9171, Berkeley, CA 94709.

HYPNOTISM

Free Hypnotism, Self-Hypnosis, Sleep learning Catalog! Drawer G-40, Ruidoso, New Mexico 88345.

MATHEMATICS

FIRST NEW CALCULUS IN 300 YEARS. Send stamped-addressed envelope. Leepress, Rockport, Mass. 01966.

PERSONAL

DATES GALORE. Meet singles-anywhere. Call DATELINE. toll-free (800) 451-3245.

Numerology readings: \$7.25. Send name, Lea & Char, Box 835, Napa, Ca. 94558.

The writer is working near the water, but is lost without her cereal that smiles.

RADIO

REMEMBER RADIO Science-Fiction? Original broadcasts — Cassette Tapes! Pohl, Asimov, Bradbury, Heinlein, Sturgeon... **CATALOGUE:** \$1.00. Catalogue plus TWO complete programs (Cassette): \$4.95. **AMERICAN RADIO (FA),** Box W, Culver City, California 90230.

OLD-TIME radio, T.V. — cassettes, B-tracks, reels, low prices, free catalogue. Imagine That, Dalton Avenue, Pittsfield, Mass. 01201.

MISCELLANEOUS

ESP LABORATORY. This new research service group can help you. For FREE information write: Al G. Manning, ESP Laboratory, 7559 Santa Monica Blvd., Los Angeles, Calif. 90046.

BEAUTIFUL MEXICAN GIRLS Needing American Boy-Friends. Photos "Free". World, Box 3876-FAN, San Diego, Ca. 92103.

I PLAY THE RACES FOR FUN AND WIN! Computer designed track system utilizes logic of science and mathematics, enabling you to walk out a winner at any dog, horse, or trotting track. 10 day money back free trial. \$9.50 P.P. to **LOGIC SYSTEMS ENTERPRISES, P.O. BOX 2241, Boston, Mass. 02107.**

JAPANESE Girls Make Wonderful Wives. We have large number of listings. Many interested in marriage. Only \$1.00 brings application, photos, names, descriptions, etc. Japan International, Box 156-FSF, Carmelien Bay, California 95711.

Horse racing and Keno system that works \$7.00 each. Hansow, Box 34, Cupertino, Cal. 95014.

RECORDS-TAPES Discounts to 73%; all labels; no purchase obligations; newsletter; discount dividend certificates; 100% guarantee. Free details. Discount Music Club, 650 Main St., Dept. 24-976, New Rochelle, NY 10801.

FOUNDATION theory — Unifies cosmology, gravity, magnetism, atomics - \$2.00. Prometheus, 250 Pestana Ave., Santa Cruz, CAL. 95065.

**When your mind wanders,
where does it go?**



Laser Books: new worlds of adventure.



Welcome to the Laser Experience. Where your mind is free...and your emotions caught.

Welcome to a unique and breath-taking series of SF adventure. Edited by Roger Elwood and featuring spectacular covers by Kelly Freas.

Three original novels every month. Just \$1.25 each, wherever you buy paperback books.

Expect the unexpected. Laser Books. Provocative. Penetrating. Unforgettable.

Laser Books New Worlds of Adventure.
MPO Box 788, Niagara Falls, N.Y.